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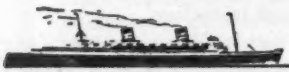

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UNIVERSITY COMMENTARY

A ROYAL COMMISSION ON THE UNIVERSITIES?

LORD SIMON OF WYTHENSHAWE
Chairman, Editorial Board, "Universities Quarterly"

THE Labour Party has approved a report on educational reforms—*Learning to Live*—which announces its intention to appoint a Royal Commission on the universities if and when it is returned to power.

The report is friendly to the universities: it proposes that there should be more students—especially in science and technology—more grants for students, and more halls of residence. It discusses the relation between the schools and the universities, and a number of other points. It insists that the universities must be free and that they must also be actively concerned with the world around them.

As it happens, the University Grants Committee has also just published its quinquennial report for the years 1952-57. The Labour Party report is very sketchy, it consists of only a few pages. The report of the University Grants Committee has about 40,000 words and covers at some length nearly all the points raised in the Labour report. It is not easy to see any important differences between the outlook of the two reports.

Up to World War II the universities were almost completely independent. The first tentative step towards a national organization was the founding of the University Grants Committee in 1919. It was not till towards the end of World War II that government planning began on a substantial and, as it has proved, a rapidly increasing scale. We have now had ten years of government planning; it is perhaps a good time to review the whole position.

I. THE GOVERNMENT PLANNING ORGANIZATION

1. *Parliament.* Parliament has, of course, the ultimate responsibility for the universities. But debates are rare; Parliament has always accorded to the universities a degree of freedom probably unparallelled in any other country in which they receive large state grants.

Parliament appoints the Public Accounts Committee, which has from time to time been actively and rightly interested in trying to ensure economy in capital expenditure by the universities. But it tends to report on inadequate and one-sided evidence, and is not always wise.

2. *The Treasury.* The Treasury is the government department responsible to Parliament for university affairs, not the Ministry of Education as in other countries. All Chancellors of the Exchequer, of both parties, and their Treasury staffs have been sympathetic and helpful to the universities.

3. *The University Grants Committee*

(i) The Chancellor, in consultation with the Ministry of Education and the Secretary of State for Scotland, nominates the U.G.C. which advises him as to the grants which it considers desirable should be given to the universities. When the Chancellor has made a definite grant, the U.G.C. has executive responsibility for allocating it among the different universities. The U.G.C. has grown and gained experience steadily over the last 40 years. The tables in the appendix show the remarkable growth, both in income and in the number of students and staff since the U.G.C. was appointed.

(ii) The terms of reference of the U.G.C. since 1946 have been as follows:

> 'To enquire into the financial needs of university education in Great Britain; to advise the Government as to the application of any grants made by Parliament towards meeting them; to collect, examine and make available information relating to university education throughout the United Kingdom; and to assist, in consultation with the universities and other bodies concerned, the preparation and execution of such plans for the development of the universities as may from time to time be required in order to ensure that they are fully adequate to national needs.'

(iii) The Chairman of the U.G.C. has always been a distinguished university administrator. There are today 16 full members: 10 are actively in the service of universities, there are 3 industrialists, a director of education, the head of a grammar school, and a retired head of a university college (the only woman). The Chairman is appointed up to retiring age, the

members normally for a period of five years, renewable.

There is a Secretary appointed from the civil service with a staff of about 30.

(iv) The Treasury recurrent grants are given on a quinquennial basis; the U.G.C. visits the universities towards the end of each quinquennium before making its recommendation to the Chancellor for the succeeding quinquennium.

The U.G.C. is in close and friendly touch on the one hand with the Treasury, and on the other hand with all the universities. Its contacts with the universities are strengthened by the existence of the informal Committee of Vice-Chancellors and Principals, consisting of the heads of all the universities. It is in constant discussion with the U.G.C. It has grown in usefulness, authority and prestige in recent years. It is sound, very cautious, unobtrusive. It is not a committee that makes plans for the universities as a whole,

(v) The Government has also influenced the universities by the appointment between 1944-50 of 9 departmental committees to report on certain developments which different government departments considered important. Perhaps the most important were the Goodenough Committee on Medical Education, and the Barlow Committee of 1946 which recommended the doubling of the output of university scientists within the next ten years.

The reports of all these committees were accepted by the Government who provided funds to implement them. These were in turn allocated by the U.G.C. to individual universities; they were known as 'earmarked grants'. It is understood that all universities accepted the grants that were offered them and in general implemented them effectively. Many important university developments were due to these grants. Together they represent a major, novel, and very successful method of government planning; in my opinion of great importance. But the universities do not like earmarked grants, as interfering unduly with their freedom, and though they are still occasionally necessary when the Government wishes to encourage new developments (such as technology today), they tend to be used sparingly. Too sparingly?

4. The government organization has three main tasks:

To see that the universities are meeting the national needs, both in the education of students and in research.

To provide the necessary finance and to ensure that the money is economically administered.

To do both these things without interfering with the essential freedom of the universities.

5. A few important questions among the many which a Royal Commission might wish to examine in connection with the government planning organization are as follows. May I say at this stage that these questions imply no criticism of the U.G.C. It is, I think, almost universally held, both in this country and in many countries abroad, that it is doing an outstandingly good job.

(i) *As regards the U.G.C.*

Are the terms of reference, the constitution and the membership of the U.G.C. right?

Does the U.G.C. study the needs of the nation adequately?

Has the U.G.C. studied why Britain has so few university students compared with every other advanced country? (See Table III.)

What factors, if any, may operate to restrain U.G.C. initiative towards ensuring the expansion of particular fields of study or the contraction of others: for example, why was the development of technology within the universities delayed so long? (See Table IV.)

Is the U.G.C. sufficiently in touch with university developments overseas? Should the U.G.C. study U.S.A. experience in managing very large universities?

Should the U.G.C. issue a more informative annual report?

Does the U.G.C. interfere unduly with university freedom, or would more guidance and initiative be desirable?

Is the U.G.C. staff adequate, or is there a danger of its becoming too large causing undue centralization, bureaucracy and delays?

(ii) *As regards Finance*

Is the quinquennial basis for grants to the universities desirable?

Are the government grants to universities (both recurrent and capital) on the right scale?

Is the allocation of these grants by the U.G.C. to individual universities satisfactory?

Has the U.G.C. adequate control to ensure proper economy?

Should student fees be abolished?

Are existing salary levels about right? Is the present strict control of salaries by the Treasury and the U.G.C. desirable and properly exercised, or does it enforce too great a degree of uniformity between different universities?

Is the right degree of recognition accorded to the Association of University Teachers?

II. ACADEMIC PROBLEMS

There are many important academic problems on which opinion, both inside and outside the universities, is much divided. How far a Royal Commission could help towards solving any of these problems is perhaps doubtful; the reforms must ultimately be made by the universities themselves. But it is clear that a report by a high level Royal Commission on some of them might have a beneficial effect. Some of the most important problems would seem to be:

1. *Freedom.* Was Sir Hector Hetherington right when he wrote recently that it is vital that each university should retain full responsibility for its own appointments, should choose its teachers, should settle the conditions of their tenure, and should, if need be, dismiss them? Also, that each university must retain full responsibility for the organization of its courses, and for the character and standards of the instruction given within its walls?

Further, was he right when he said that in his opinion these were the only two freedoms which were essential to universities?

2. It is suggested that the immense increase in research in recent years is deleteriously affecting teaching in some universities. Is it true, for instance, that the average Arts don at Oxford spends about three times as much time in personal teaching as the average don in some regional universities? If so, why? And can anything be done about it?

Owing to the remarkable generosity of the Government, through the U.G.C., the number of students with which one teacher has to deal in the universities has fallen in the last 30 years from over 12 to under 8. How far has this increased available energy in the staff been devoted to:

(a) increased research?

(b) work on new subjects?

(c) improved teaching of the students?

3. How far do university entrance requirements and methods of selection, in Oxbridge and in other universities, tend to cause excessive specialization in the schools?

4. Is the usual three-year course for the first degree too short? Are the usual honours and general courses on the right lines? Are they too specialized? Do the standards tend to be too high for the average student?

5. Should universities pay more attention to general education? M.I.T. has a staff of 100 whole-time teachers in humanist subjects for 4,000 technological students. Is this desirable? Should we have more experiments like Keele?

III. THE UNIVERSITIES

There are four main types of university in Britain with very different characteristics: Oxford and Cambridge, London, The English (and Welsh) regional universities, The Scottish universities. Oxbridge have had three Royal Commissions in the last hundred years, mainly to define the relations of the colleges to the university; London has had two in the last fifty years; the rest have had no Royal Commission (except two individual universities that were in trouble).

The four groups are so different that a Royal Commission could very easily occupy the whole of its time and energy on any one of the four. The problems of London are very special; the problems of the Scottish universities are not unlike those of the English regional universities. There can be little doubt that a Royal Commission should consider the problems of the universities as a whole; but their chief attention would probably be devoted, on the one hand to Oxbridge, and on the other to the regional universities. Some of the main questions which might be dealt with in these fields would appear to be as follows:

Oxbridge

1. What is the proper place of Oxbridge in the national system? Is the existence of two such outstanding universities, run on their present lines, consistent with giving all young persons equal opportunity of the best university education?

Cambridge has about 70 Fellows of the Royal Society, Oxford

about 40—no regional university has more than 12. Is this a desirable distribution of the nation's top scientific talent?

2. Is Oxford the last great Arts university in the world? Is it important to maintain its character and prevent the colleges being flooded by scientists and technologists?

Was Flexner right when he wrote in 1930 (*Universities: American, English, German*): 'Oxford and Cambridge establish a personal relationship between the undergraduate and his tutor that is the most effective pedagogical relationship in the world.'?

3. Flexner said, in 1930, regarding the government of Oxford and Cambridge: 'As machinery, it is poor, cumbrous, unwieldy, wasteful.' How far is this true today? Is it fair to say that the much publicized but quite unjustified protest by Oxford in 1958 about its share of the proposed quinquennial grant from the U.G.C. proved the need for better control by the university of its financial affairs?

Is the administrative system satisfactory? Should there be a lay body to deal with buildings and finance? Should a permanent vice-chancellor be appointed? With what powers?

4. Oxbridge have grown steadily (except in war time) over the last generation by about 3 per cent per annum, while constantly suggesting that they do not desire to expand further. Each of them has now about 8,000 students. Should this growth be allowed to continue, or are they large enough?

5. Are the relations between the colleges and the universities satisfactory in matters of finance, of power, and of teaching?

Should the U.G.C. give grants direct to colleges? If so, on what conditions?

Is the selection for entry well carried out by some or all of the colleges? How far is it true that there is in some colleges 'an area of corruption'? Is this acceptable? Should the universities have more influence in this matter?

Regional Universities

1. The main expansion of the universities of Britain will necessarily take place in the regional universities. Are the U.G.C.s present plans for the total increase in student numbers up to about 136,000 in the next ten or fifteen years and for the distribution of those students among different universities adequate and satisfactory?

It is planned that some regional universities should increase to 6,000 but it has also been suggested that some of them may have to

increase to 8,000. Is this desirable? If so, are any major changes in internal organization of the universities desirable? Can we learn anything from America?

If such increases are undesirable, would it not be important that the U.G.C. should now take urgent steps to extend the smaller universities more rapidly, and immediately to found half a dozen new university colleges?

What is the optimum size of a regional university? Of its Faculties? Of its departments?

2. From my own experience it appears to me that the normal constitution of the regional universities is excellent: that the division of powers between Court, Council, Senate and Vice-Chancellor is right. None the less, has anyone any suggestions to make for major improvements in these constitutions?

How far should the non-professorial staff be represented on Council? On Senate? On any planning committee of Senate?

3. In recent years public opinion has begun strongly to demand a great extension of halls of residence, to look with disfavour on students living at home, and to encourage students to go to universities away from their home towns. Is this wise? Are British homes really not fit for the students to live and work in? Can anything be done to improve the conditions of life for students whether living at home, in lodgings or in halls? How can progress towards the day residential university be accelerated?

4. The strength of Oxbridge lies in the groups of Fellows, each group responsible for the welfare of the college and the students in a concern of manageable size, where personal contacts are excellent. Halls of residence in regional universities rarely or never offer comparable advantages. Could regional universities produce something like the intimacy of Oxbridge college contacts by giving maximum responsibility to the senior dons in each department?

IV. UNIVERSITY STRATEGY

I hope I have succeeded in making it clear that the U.G.C. has wide and heavy responsibilities and fulfils them excellently. Essentially, it must get to know all the universities and their main problems; it must advise the Treasury as to the total grants that they require; it must allocate the Treasury grants, both the recurrent block grant,

other recurrent grants, and all capital grants in detail among the universities, and must help as far as possible to ensure that all the universities spend their grants with wisdom and efficiency. This is a very big executive task. The Committee meets about 12 times a year for the whole or part of a day, and much of its time and energy is inevitably taken up in dealing with the heavy administrative agenda. The recent U.G.C. report covering the last quinquennium gives a good idea of the scope and variety of the questions with which it deals.

Apart from administrative questions, the U.G.C. does spend some time considering questions of policy, some of which are dealt with in the quinquennial report. It has recently set a precedent by appointing two committees, one on halls of residence and the other on the control of capital expenditure, especially on buildings. The only other time the members of the Committee get for thinking about long-term university problems is during their visitation to all the universities towards the end of the quinquennium. But on these occasions they are always deeply involved in the affairs of a single university and the opportunities for discussion of general long-term questions are limited.

As an illustration of the difficulties the U.G.C. have in this matter, the new quinquennial report devotes six pages to a discussion of the problems of general education and of specialization; an excellent analysis, but the Committee took no evidence. Their only conclusion is (page 42): 'We are certain that thinking on this subject, and fundamental thinking, was never more necessary than it is today.'

The result is that, in practice, the members of the U.G.C. have limited time and energy to consider long-term university policy; certainly nobody else does so. Contrast the United States: numerous and well thought out reports have appeared in recent years from committees appointed by the Federal Government on the one hand, and by individual universities on the other, examples of which are the famous reports initiated by President Hutchins on education through the thousand best books and the Harvard report initiated by President Conant on General Education. And there is the recent report by Columbia University towards the cost of which the Carnegie Corporation contributed 165,000 dollars.

Contrast also the reports of committees appointed from time to time by the Ministry of Education. There are at present 7 Standing Advisory Councils or Committees, all dealing with long-term problems, and 3 temporary ad hoc Committees. The Ministry has, of

course, an excellent staff to provide high-grade secretaries for all these committees. It is understood that these reports have played an important part in framing national educational policy.

Many long-term questions have been raised in this article: to give a very important example, we have in this country the smallest number of university students per thousand of the population of any western country (Table III); we have the shortest period of study to obtain a degree; the government grants to the students are higher than those given in any other country. Quite clearly, there are all sorts of fundamental subjects which can only be thoroughly studied by a body like a Royal Commission with all available evidence before them, or by special committees appointed by a Minister.

Committees to prepare reports on such matters could be appointed by the U.G.C. But it is possible that a Royal Commission might consider that this could preferably be done independently of the U.G.C.; the committees might be appointed by the Chancellor of the Exchequer, the Minister of Education or the Lord President of the Council, of course in consultation with the Treasury, the U.G.C. and the universities. The Minister might from time to time appoint committees to study any long-term university matters which appear to him important.

There would seem to be much to be said for having two separate bodies to deal with university affairs: on the one hand, the U.G.C. to carry on the heavy and vitally important administrative work which, by common consent, it is doing so admirably; and on the other, a committee or committees appointed by a Minister of the Crown to study exclusively long-term problems of university strategy.

V. CONCLUSION

Sir Eric Ashby has recently written: 'In Britain the prestige of the universities has never been higher than it is today. Whereas the first industrial revolution was accomplished without the aid of the universities, the second industrial revolution had its origin in the universities.'

Professor Dodds, the distinguished ex-President of Princeton, wrote some years ago after spending several months investigating the British university system: 'Several persons remarked that the less Government/university relations were discussed in public the better, and intimated that it would be wise not to disturb sleeping dogs.' Many university men would today agree with this: they feel that the

universities are in the midst of a period of very rapid, indeed almost revolutionary, expansion as regards science and technology; they will be so fully occupied that this is not the time to impose on them the additional burden of preparing evidence for a Royal Commission.

On the other hand, I have tried to show that the changes in the last 40 years have been on a vast scale: an elaborate and quite new government planning organization has been set up; the cost to public funds of the universities of the country has risen from a figure of under £2 million to an estimated total of well over £65 million in the current year. (See Table I.) It is likely to rise by another £20 million in the next 10 or 15 years: the number of students will increase by 50 per cent and the fields of knowledge in which teaching and research are required are increasing at an even faster rate. Generous as the government grants appear to us, there can be little doubt that owing to the much larger proportion of the population who attend universities or institutions of university rank in the United States and Russia, both those countries must spend a substantially larger proportion of their national income on university education than we do.

It is sometimes suggested that Oxford and Cambridge present special difficulties, mainly owing to their college system, and that a Royal Commission on those universities might be advantageous. But they cannot be considered in isolation; one of the most important points is the position of Oxford and Cambridge in the national system; by their very excellence they greatly affect the other universities in many ways.

There has never been a Royal Commission on the universities as a whole, but on balance it does seem at the present time that the advantage of a thorough and independent study of the whole university system would distinctly outweigh any disadvantages, always on the assumption that the personnel of the Commission consisted of men and women of wide experience in university and public affairs and of outstanding wisdom. And surely it is important in a democracy that public opinion should be kept more fully informed of the affairs and developments of the universities than it has been in the past.

It is clear that a Royal Commission could not find time to examine more than very few of the large number of questions which would repay investigation. It may well prefer to confine itself to studying the national planning organization: to consider whether the hierarchy —Parliament-Treasury-U.G.C. (helped by the Vice-Chancellors'

Committee)—is fulfilling the national needs as regards the administration of the universities, and, if not, how it should be modified; also, whether an additional organization, probably under a separate Minister, should be set up to examine the many much-neglected long-term university problems.

It is to be hoped that if a Royal Commission is appointed, this will not be held to be in any way a criticism of the University Grants Committee or of the universities themselves. Many university men abroad believe that we have in this country solved the problem of combining a large government grant to the universities with efficient supervision and with complete freedom in all academic affairs with a degree of success unequalled elsewhere. The U.G.C. has played a major part in this success and, personally, I certainly regard its work as being of the greatest importance and value to the country. The object of the enquiry should be to consider in what way the universities and the U.G.C. can be helped to meet their ever-increasing burdens. By common consent, both the universities and the U.G.C. are doing an excellent job for the country; let us hope that the recommendations of a strong Royal Commission may help them to do it even better.

[Discussion is invited on the points raised in this article. Editor.]

APPENDIX

TABLE I

UNIVERSITY GROWTH—REVENUE

Academic Year	U.G.C. Grants			Total Parlt. Grants/Total Recurrent Income
	Recurrent	Non-Recurrent	Total	
	£	£	£	%
1920-21	798,000	252,000	1,050,000	33·6
1925-26	1,513,000	—	1,513,000	39·5
1930-31	1,798,000	—	1,798,000	36·3
1935-36	1,828,000	—	1,828,000	34·3
1938-39	2,078,000	125,000	2,203,000	35·8
1947-48	8,850,000	2,149,000	10,999,000	57·8
1950-51	15,222,000	7,228,000	22,450,000	64·9
1955-56	26,265,000	7,083,000	33,348,000	70·4
1956-57	28,253,000	9,134,000	37,387,000	69·9

FORECASTS FROM CHAIRMAN OF GRANTS COMMITTEE'S ADDRESS TO THE ROYAL STATISTICAL SOCIETY

Academic Year	U.G.C. Grants			Grants to* Students	Total Contribution from public funds
	Recurrent	Non-Recurrent	Total		
	£	£	£	£	£
1958-59	36,000,000	14,000,000	50,000,000	15,000,000	65,000,000
1961-62	43,600,000	18,750,000	62,500,000	15,000,000	77,500,000

* Latest estimates of student grants 1958-59 from the Ministry of Education and from local authorities amount to £15 million (England and Wales only). The same figure has been taken for 1961-62 though it will undoubtedly be larger.

NOTE—The above table excludes grants from other government departments and from local authorities which at present amount to over £2 million. The total contribution from public funds at present is, therefore, at the rate of at least £67 million per annum.

TABLE II

UNIVERSITY GROWTH—STUDENTS AND STAFF

Academic Year	Full-time Students			Full-time Staff	Student-Staff Ratio
	Advanced*	Other	Total		
1920-21	†	†	48,452	†	†
1925-26	2,063	39,543	41,606	3,270	12·7 : 1
1930-31	2,237	45,350	47,587	4,125	11·5 : 1
1935-36	2,961	47,568	50,529	4,839	10·4 : 1
1938-39	3,094	47,152	50,246	5,162	9·7 : 1
1947-48	5,805	72,702	78,507	7,137	11·0 : 1
1950-51	8,502	76,812	85,314	9,517	9·0 : 1
1955-56	9,836	75,358	85,194	11,233	7·6 : 1
1956-57	10,509	79,357	89,866	11,542	7·8 : 1

* Excludes 4th year Diploma of Education students.
† Not available.

NOTES—

1. Over a period of 35 years, while the number of full-time students increased by 75 per cent, the U.G.C. grants have increased in real terms (after allowing for the depreciation in the value of money) by roughly 1,500 per cent.

2. It is estimated that students may increase to about 136,000 by 1965-70, an increase of 50 per cent on the 1956-57 figures.

TABLE III

STUDENT POPULATIONS—1954

Country	Students	Population	Student/Population Ratio
U.S.A.	2,283,718	162,409,000	1 : 71
Italy	208,742	24,127,000	1 : 116
U.S.S.R.*	1,228,000	200,200,000	1 : 163
Canada*	71,600	15,601,000	1 : 218
France	150,096	43,000,000	1 : 286
Australia	29,445	8,987,000	1 : 305
Switzerland	15,622	4,923,000	1 : 315
Sweden	20,801	7,214,000	1 : 347
West Germany	133,195	52,690,000	1 : 396
U.K.	83,758	51,217,000	1 : 611

* 1955 figures. Source: U.N. Statistical Yearbooks.

NOTE—The U.N. Yearbook warns that 'inter-country comparisons are subject to caution owing to variations in systems as well as differing criteria adopted in gathering and presenting the data'. For instance, while the student figures refer to 'universities and post-secondary professional schools', some countries, including the United Kingdom, only include students at universities and university colleges. For this reason, the position of the U.K. may not be quite so bad as is shown in the table.

TABLE IV

NUMBER OF GRADUATE ENGINEERS PRODUCED

	1950	1954
U.S.A.*	50,000	20,000
Soviet Union*	28,000	54,000
Great Britain†	3,600	3,400

* Article in *New York Times*, November 7th, 1954.

† U.G.C. reports—figures relate to academic years 1949/50 and 1953/54 and are for degrees and university diplomas in technology.

THE HISTORICAL APPROACH TO SCIENCE

III.—'NOTES TOWARDS THE DEFINITION OF A SCIENTIFIC CULTURE'

FRANK GREENAWAY

In previous articles I referred to the 'New Humanism' which the late George Sarton hoped would provide a common ground for scientist and humanist, through the historical study of science. I suggested that an analytical historical treatment was not enough and that one should go beyond Sarton's position to one from which a system of historical criticism could be developed.

Can science become a part of the common tradition of the educated man in the same way as art, literature, religion, political institutions? It may be said that science is already part of our tradition: that the world is science-ridden, and can never again be independent of it. This would be true only if by 'science' we meant that part of it which has followed on man's immemorial habit of making use of material things and having useful ideas. If tomorrow all search for material knowledge for its own sake were to cease, the change would go unnoticed for generations, perhaps for ever. We already have so great a store of facts and techniques that their gainful exploitation could go on without any new principle being discovered. A stable civilization could come into being, settled on a higher technological level than any civilization of the past but as technically unprogressive as any of them. The man who made his dugout canoe worked to rule-of-thumb, repeating what someone else had shown him. So does nearly every man helping to build an aeroplane. We could go on making the same kind of aeroplanes, television sets, textiles, drugs, without any change in design, quite long enough for new generations to grow up quite unacquainted with 'natural philosophy'.

How many generations have we in fact had since (to use its other early name) 'experimental philosophy' became a major social force? Ten? Perhaps more. Twenty? At most, even if we agree with those historians who seek its origins as far back as the 14th century. If the

tide turned, how many generations would it take for it to fade away? Ten? Twenty?

It is generally assumed nowadays that the conjunction 'science and technology' is a natural and inevitable one, that with more science we shall automatically have more beneficial technology; that without science technology would decay. I think this is worth questioning. The technologist is concerned to draw up specifications of things which can be made and operations which can be carried out. He calls on information about the natural world, theories which predict the behaviour of substances and systems, and draws up specifications for the assembly of new arrangements of objects. (And new arrangements of atoms. The physicist and the biologist figure most often in philosophical and moral debate, but it can be argued that it is the chemist who is the master-builder of modern society.) Once this specification is made the technician can repeat the process of production and could go on doing so without insisting on change. If change of specification were required the technologist could supply it without necessarily in his turn demanding more original discoveries.

All the same the technologist has for a little while (hardly longer than this half century) gone beyond making use of what natural knowledge was accidentally available and has consciously insisted that more be got by other men working in other mental conditions than himself, that is to say by 'scientists'. Some results of what has become a contract between technology and science are beneficial to both. From the scientist come more theoretical resources for the technologist; from the technologist come more massive apparatus, more plentiful supplies of materials for the scientist. If some people suggest that many scientists have become slaves to huge machines, particle accelerators, radio telescopes and the like, which inhibit liberty of curiosity, it can be answered that the economics of discovery no longer depend upon the barter of individual inspiration but upon the credit of association with the intellectual corporations into which our research centres have developed. Until this century the scientist's social group was that of all educated men. (One would choose to say 'intellectuals' had the word not been debased.) His group is now a separate one including only 'scientists', 'applied scientists', 'engineers', 'technologists', and under economic pressure his identity within that group is slowly losing definition.

It is still possible to extract from the mass of activity loosely called science some enterprises which give all the dull rest its character and

continuity, just as it is possible to extract from the whole mass of musical activity (ranging from musical comedy to Mozart) those parts of it which are best, noblest, most fruitful and consequently definitive. We call it all 'music', but there is no ambiguity when, in talking critically about the arts, we use the self-same word but tacitly select for reference only the highest creations in that form. Such a tacit selection of the highest creativity in science does not yet take place in the intercourse of all educated men. Or shall we speak of 'cultured' men? I use it here because of its force in T. S. Eliot's remark that 'the person who contributes to culture, however important he may be, is not always a "cultured" person'.

It is a subsidiary part of Eliot's thesis in the book in which this remark occurs (*Notes towards the Definition of Culture*) that the nourishment and transmission of culture has generally been effected by an *élite*. This cultured élite is to be distinguished from the separate élites of each calling in society. (Membership of such an élite is not automatic or institutional. Not every member of a political party can claim to belong to the political élite; nor every bishop to the religious élite; nor every Fellow of the Royal Society to the scientific; nor every Vice-Chancellor to the academic.) The qualities which confer membership of the generalized cultured élite appear to me to be much the same as those claimed for themselves by those self-styled humanists who criticize the scientist for failure to conform to their system of values. Their role is to preserve and transmit culture unchanged. It is the role of the creators (who are the members of the specialized élites) deliberately to attempt to bring about change. The ensuing balance between continuity and change makes for health and opposes decadence.

To illustrate in terms of the arts: men will go on writing so long as they believe some others will read; to compose music so long as some will listen; to paint while others will look. But the artist, composer or writer will not as a rule promote by his own volition the welfare of the art in which he practises. The best work will not immediately be foremost. There has to be criticism of the new at the same time as appreciation of the best of the past. Possession, exhibition and performance are made possible by the élite which does not itself create, but holds together because, by and large, each individual member has a multiple faculty of appreciation, giving strength by cross-linking. This is one of the reasons why all the arts of a period sometimes seem to have a common character—rococo, baroque,

romantic or whatever—not because the creators in their several disciplines work in the same way but because their disparate work is apprehended in a common way.

It would be an interesting exercise to seek evidence of style in scientific work at different periods. I referred in my first article to the epic character of Euclid and *De Re Metallica* but I should risk being called precious if I ascribed lyric qualities to some of the many modest and elegant experiments of the early students of electrostatics. The usual terminology will not often match, but that there is style in scientific experiment and thought would be agreed by anyone who has studied historical experimental work in any detail. Particularly is this true where one has been able to handle the original apparatus. Priestley and Cavendish each worked in his own distinctive way, but if we want a word to take in the differences and resemblances we find between them, style is the only one with the right flavour.

The apprehending, comprehending, élite finds in style a diffuse summation of the sharply focused critiques of the professional critic. The musical layman will differentiate early Beethoven from Mozart or Haydn with confidence on style alone where the musicologist will offer a dozen specific, distinguishing instances. The layman's ability to do this rests on a mixed background of criticism and of apprehension by the cultured élite in which he is incorporated. The scientist of the past does not, however, survive in the common estimation in the same way. Who is ever heard to talk lovingly of 'early Faraday' or 'middle-period Berzelius'?

This musical parallel rest on the pure pleasure that may be got from the creations of the past, but it may be insisted that we must look also to utility. We enjoy looking at a house that was once lived in, but we only tolerate it if it is still habitable. Façades have to be fought for. A scientific hypothesis may long ago have surrendered its utility to some later generalization, along with a lot of other related hypotheses. Why preserve the façade of a terrace of studies now superseded? Why bother, for example, with the history of the many exercises in the separation of the rare earths now that modern theories of atomic structure have shown us that there are so many of these elements and no more; that there is no longer any question of their number to be answered by experiment? The interest lies in the way the older work has been superseded; it must be looked at historically as part of something continuing, and moreover as a footnote to a

succession of generalizations. The change in our attitude to the separation of the rare earths is part of a nexus of changes in attitude to the classification of the elements, to the nature of the elements, to the nature of matter. One of the obstacles to the assimilation of science by Eliot's élite is the absence of those extrinsic standards of value of scientific work to which I referred before. As Eliot says, it is unlikely that 'the profoundest and most original works will reach the eye or command the attention of a large public, or even of a good number of the readers who are qualified to appreciate them'. He is referring to literature, but what he says is equally true of music or painting and equally true of science. Eliot's next words apply also to science as it is generally presented to the public through the mass-media and even through more respectable works of popularization. 'The ideas which flatter a current tendency or emotional attitude will go farthest; and some others will be distorted to fit in with what is already accepted. The residuum in the public mind is hardly likely to be a distillation of the best and wisest: it is more likely to represent the common prejudices of the majority of editors and reviewers.'

It is true that some great works of art or literature have been at once recognized and accepted. So do some works of science, like that of Dalton, enter at once into their proper place. But some of the greatest, like the *Principia*, did not.

By neglecting to foster criteria of excellence in accounts of scientific work, the cultured élite of Europe and America have rendered themselves vulnerable to attack by an overpowering mass of scientific humbug in which minor discoveries are puffed as unjustifiably as those poems of Mr. Robert Montgomery which aroused the scorn of Macaulay. It is no use the élite asking outside its own ranks for means of interpretation of science. Its own scope is incomplete, in its membership and in its corporate judgment. There is thus a gap in the education of the scientist (*cum* technologist, etc.), so that even those scientists who would most willingly and suitably graduate to the cultured élite are hindered from unifying their own judgments, through lack of a literature and a tradition to guide them.

The cultivation of the scientist and the adoption of science into the repertoire of the cultured élite are, then, one and the same problem. Let me repeat the words of George Sarton which I quoted in my first article: 'The true humanist must know the life of science as he knows the life of art and the life of religion.' This does not match Eliot's view

of the primacy of religion as the parent and nurse of culture, but there is no reason why we should reject the equality posited by Sarton. Eliot recognizes a duty to society: 'We shall try to improve it in this respect or the other, where excess or defect is evident; we must try at the same time to embrace so much in our view that we may avoid, in putting one thing right, putting something else wrong.' But we cannot maintain perfect control. 'It is as much, or more, because of what we do piecemeal without understanding or foreseeing the consequences, that the culture of one age differs from that of its predecessor.' This would seem to deny any meaning to progress, even if it recognizes that some conditions are more desirable than others. Sarton asserts that no human activity is truly cumulative and progressive except the acquisition and systematization of positive knowledge, but in ranking science, art and religion together as necessary factors in humane experience he provides a corrective to Eliot's pessimism.

Can these factors be equivalent for everyone? Religion is so wide a term that I hardly dare use it except in quotation. Sarton would probably, and Eliot would probably not, admit as religion the devout ethical Godlessness of the latter day evolutionist. All the same, there is in any system we can remotely call religious a function we can call that of the worshipper, who is, as it were, the 'consumer' of religion, in much the same way as the members of Eliot's cultured élite are 'the primary consumers of the work of thought and art produced by the minority members'. Art and religion continue to exist because they are continuously consumed. Who has been the consumer of science?

Until the beginning of the 19th century the consumer was that same élite which consumed the arts. Then industry began to consume science at an accelerating rate, chemistry, which had been late in developing its scientific character, being the first discipline to prove entirely digestible. The first important industrial laboratories were chemical, and it was chemistry which most rapidly lost its association in the cultivated mind with the humane 'natural philosophy' of former days. More and more of science was consumed by scientists alone; as popular education became more and more vocational, the interpretation of science by intermediaries became more necessary, until eventually the popularizer was not merely summarizing and collating (as he had done a century before); he was attempting to predigest and feed to his public something they could no longer take in

raw. Bishop Watson's 'Chemical Essays' of the 18th century had given way to Huxley's lay sermons of the 19th.

Today the direct relation between professional creator and amateur assessor which continues in the arts has no surviving parallel in science, while at the same time the consumption and utilization of science by another kind of professional, the technologist, are manifestly affecting all our lives. Here we see a principal cause of the cultural instability which has prevailed in the twentieth century. Many minds of moderate creative powers can find an avenue of self-expression in what is often a somewhat mechanical and regulated way through the publication of papers in scientific journals of a very narrow specialist scope. The process of assessment by impartial referees still selects before publication, the mediocre which gets through subsides into obscurity, the original and fertile eventually produces its effect after scientific approval and verification. Nevertheless, the bulk of this written self-expression never finds its way into the common stream of literature because it is never assessed by any other merits than the stimulus it may give to further experiment, or the gainful utility of its information. The operation of the criteria of scientific excellence has two effects on the paper considered as a literary product. It drains out of the effort of composition any literary content of beauty of language, metaphor, hyperbole and so forth which might hinder the operation of the machinery of scientific assessment, so that the non-scientific reader finds nothing there to read even if the material is intrinsically intelligible. Secondly, the young scientist is given nothing to emulate but those qualities in the paper which will guarantee scientific survival.

Now it will be said that the scientific literature is not meant to be literature in the sense that it is published to all the world to be read for 'the acquisition of wisdom, the enjoyment of art and the pleasure of entertainment' (Eliot). It is a tool like a dictionary or a railway timetable. There have indeed been proposals for doing away with the existing periodicals and setting up a world clearing house for individual papers. Even now we might do well to think of scientific literature as a 'pseudo-literature', 'pseudo-published'.

All the same we ought not to attribute our intellectual malady solely to the accidents of the forms in which scientists communicate with one another. I have said that there is no duty on the part of the scientist to think all the time of the eavesdropping layman. Scientific communication would be paralyzed if every paper had now to be

made intelligible to the ignoramus. We face an unhappy choice. Either we attempt to interfere with a self-perpetuating system of communication of the scientist-technologist group (which would be both absurd and doomed to crushing defeat) or we resign ourselves to the impossibility of restoring communication between the scientist and the rest of educated society. But the scientists have troubles of their own. 'Let us explain ourselves to the public' they are heard to say, but they mean 'Let us explain ourselves to each other.' It is not difficult for one specialist to learn the essentials of another when there is a specific job to do, and there are endless means of mutual aid for a job in hand. It is the wider understanding of scientist by scientist that is in danger. This again suggests that we are really discussing a single problem.

The cultured élite absorbs art, literature, created products of all sorts, at the same time as it emits its appreciation (expressed in conversation, criticism, subvention, approbation, and in the informal education of its own recruits and successors). Experimental science was virtually a new Muse, a new means of expressing an attitude to the world. Its new creations were absorbed by the cultured élite of the 17th century and a new equilibrium was established which endured until the early nineteenth century when professionalism in science changed the characteristic sense of responsibility of the scientist from the individual to the corporate. The Musehood of science was lost.

To some extent the change was obscured by the flush of interest in Darwinism. So long as men could speak with passion about what they held to be fundamental principles it would go on appearing as if Wilberforce and Huxley were consolidating common ground by their very opposition in the biological realm. In fact what community of interest there might have been was being destroyed by the physical sciences. After Perkin's accidental transformation of organic chemistry into the most pervasive of all industries, after Kelvin had shown that pure physics and the promise of profit could be at the command of one intellect, after the machinery of communication among scientists had begun to break down (a fact which Kelvin recognized), it was no longer certain that the products of scientific study would be intelligible as they issued from the scientist himself. Perkin's discovery was hardly science by any definition in logic; much of Kelvin's mastery of electrical communication was economic and political in effect. How are we to detect the scientific essentials?

The influences working on the next man after Kelvin, the next man

after Darwin, and so on, are not those masters' work alone. They come from all that has gone before. The change that took place after 1850 was a slipping away from the scientist's grasp of the means of recognizing the basis of his own work. Moreover the influence of those philosophers who view science as a system of explanation, as distinct from a process of creative innovation, has brought about a neglect of the study of its tradition. No matter whether the work of Darwin makes the work of older writers unreadable when new consequential discoveries are to be made, no matter whether Lavoisier makes phlogistonist writers look obsolete, the successor to the epoch-marker still uses most of the science which has gone before. Tradition is a hydra: the innovator can only cut off one head at a time, be the tradition scientific, poetic, political or what you will. In all but the scientific field this might be agreed, but the traditional element plays no part in modern conceptual thinking about science. Its restoration is one of the keys to the new understanding of science which we need. The forms of that tradition are not easy to convey, however, in historical writing about science as at present practised.

It is one error to eliminate the personal from the history of science, making it a mere history of ideas. It is another to make it a succession of portrait miniatures of a minority of great men taken at points in their lives when they were publishing. The first error leads to an arid esotericism, the latter (to take over a phrase Eliot uses about regional cultures) to 'an artificially sustained antiquarianism'. But I shall press the merits, as things are, of the biographical approach.

When the *Philosophical Transactions of the Royal Society* were read by educated men like Evelyn or Swift, as a matter of course, when science was one product of a widespread amateurism, the historical element in science (by which I mean that element which argues from some continuity of progress) was consumed by the reader at the same time as the natural-philosophical. With the growth of professionalism these two elements were separated. The formal pattern of the scientific paper remains retrospective, in that it refers to past data which it proposes to supersede, but the run-of-the-mill paper no longer looks back any distance. One ought not, in thinking of the past, to think of science as travelling along a road: the possibilities of scientific discovery are not determinate. One would be happier, however, if the modern scientist were not so often like a tractor travelling on caterpillar tracks, perpetually pulling up his support behind him as he goes. Even this simile is inadequate. The

nineteenth century optimist looked back to progress and forward to yet more, convinced, like Condorcet, that there was ground for confidence. The modern scientist-technologist group, as a whole, faces the future with confidence while abandoning any attempt to examine the past to see if there is any ground for their confidence.

I emphasize 'group as a whole' because of the institutionalized character of science, a factor which Popper emphasizes in his *Poverty of Historicism*.

It is curious to read Eliot's expression of indebtedness to Karl Mannheim, to read Popper's censure of Mannheim, and then to find that some of Eliot's principal conclusions are more Popper than Mannheim. For example Popper says: 'Once we realize, however, that we cannot make heaven on earth but can only improve matters a little, we also realize that we can only improve them little by little.' This echoes closely Eliot's words quoted above. Popper is here opposing the Utopianist or holistic or blueprint school of thought of the reform of society. He reminds us that the technologist's design for the whole is possible only because many piecemeal experiments have been carried out beforehand. The residual danger in Popper's wise words is in his use of the passive voice. Experiments do not do themselves. Men do them. In emphasizing the particular nature of experiments he neglects to mention the particular nature of their authors. He rightly asserts that in verifying the correctness of a scientific theory the question 'How did you test your theory?' is highly relevant. I cannot agree however that the question 'How did you first *find* your theory?' relates to 'an entirely private matter'. It is of the greatest interest to contemporary and posterity alike to know how a poet conceived a poem or a musician a song. It is a private event perhaps, but after publication it is no longer a privileged event. So with science: each private conception once published (and I do not mean here only 'pseudo-published') relinquishes privacy and becomes an object for critical study. No doubt the testing of the theory is all that matters for its acceptance as someone else's tool, but if the theorist asks for wider recognition, other questions must be endured. The attempt to discover the origin of the theory is one of our piecemeal experiments in the reform of the social order.

This discovery of the origin of scientific thoughts is a job for the historical critic, whose product, which I see as a branch of literature, is to be consumed by that same élite as consumes all that is best in all the arts. Given a historical view which saw science as successive

beginnings in self-expression, one can imagine a literature of science living alongside the pseudo-literature of experimental reports. It would have to be a literature of harmonious purpose, accepting the principles of science at the same time as it moved to question its deeds. The pseudo-literature of science would be part of its matter of experience, as the events and records of life and nature are the matter of experience of poet and painter. And these also it would share because, for the short way ahead that I can see, this literature would need to be, in large part, biographical.

One reason why we do not know the past of science as well as we might is that the scientist has been served by fewer and less able biographers than almost any other class of creative thinker. At first sight it seems mere empty piety to write the life of some man whose works have all been superseded. We can still read a minor poet for pleasure but is there any value in reconsidering the works of a minor chemist? That question can wait until there are only minor figures waiting for attention. The biographical study of science can be profoundly rewarding to the student, and any study which can move the student can be the basis of a work of art.

There is a great field open to writers who are prepared to risk failure because the task might prove too difficult. They will not reform society: they will do their piecemeal experiments in rescuing the life of science from the confusion into which it has fallen, and perhaps change it a little. Their successors may see the day when science, past and present, is apprehended as a unity, but we must first get to know the scientists of the past and present together. It is so easy to be deluded into thinking of the progress of science as a triumphal march. It is nothing of the sort. It is a stumbling shuffle from one intellectual expedient to another.

But it has always moved on, until here we are. It is not certain that we shall go on from here. We look back to one century of Greek history to try to understand the making of modern European culture. Is it not possible that historians of the future will look back to our century, pre-eminently a century of science, to divine the making of the single world civilization which might yet come? It will not be quite the same. While science has found many writers who fancy themselves to be its Plato or its Aristotle, it has not yet found its Herodotus, or its Thucydides. When they do at last write, their works may outlast the science they record.

GEOGRAPHY DEFENDED

W. H. PARKER

Associate Professor of Geography, University of Manitoba

BRITISH Geography is under fire. Besides Mr. Tudor David's recent article 'Against Geography' in *Universities Quarterly* (May 1958), there have been Dr. R. S. Scorer's severe criticisms in *Weather* with a scathing supporting letter by Mr. J. B. Rigg, and a hostile attack in the *Journal of the Town-Planning Institute*[1] by Mr. G. Allen. Mr. Tudor David contended that, of the two main branches of the subject, systematic geography was but the geographical aspects of other subjects, while regional geography was incapable of realizing its aim of a synthesis of the heterogeneous phenomena found in an area. He would relegate geography in universities to a position subordinate to the department of town and country planning; where, however, it would be scarcely welcome, if Mr. Allen's strictures have any general support among the planners. Mr. J. B. Rigg, referring to geography in the grammar school, asserts that 'apart from the utilitarian aspect of the subject, the present Advanced Level syllabuses present no challenge whatever to the intelligent boy or girl'. Like Mr. David, he concludes: 'It is reasonable to ask whether the large sums of money now being spent on maintaining university geography departments can truly be justified.' Harvard University recently decided that they could not; it has abolished its department of geography and dispersed the staff.

Before accepting the arguments of these critics, one significant fact should be borne in mind, and that is the impregnable position of geography in France, Germany, the Soviet Union and many other countries, where its enviable status rests upon its acknowledged value as a branch of higher learning. The position of geography in these countries suggests that, however much British geographical practice may be open to criticism, a destructive campaign for its abolition as an advanced subject is misguided; but that constructive criticism, aimed at eradicating what is false and shoddy, so that the subject can make the valued contribution here for which it is esteemed in other European countries, is another matter and should be welcomed.

Destructive criticism, made without sufficiently probing the philosophical basis and principles of geography, and made without know-

ledge of its history and practice in other countries, is harmful because it deters good men from the subject and thus makes its improvement more difficult. In Germany and the U.S.S.R. its reputation has been built upon the efforts of a series of able men respected by their fellow scholars. The blame for the continued low status and standards in Britain rests very largely with those in British academic life who, during the past century, failed to accord the 'new geography' the welcome it received in other European countries on its merits, but who instead, by grudging it encouragement and denying it status, starved it of intellectual life-blood. But those who, in the English-speaking world, have so debased the practice of geography as to expose themselves to the kind of criticism we are considering, have also contributed to its unsatisfactory status, and have betrayed the pioneers by failing to grasp the opportunity afforded by the opening of the universities to geography.

One of the many ways in which British and American geographers have laid themselves open to attack is the arrogance with which individuals have set themselves up as their own judges of what geography should be, providing critics like Mr. Tudor David with definitions often contradictory and sometimes absurd. All too often they have not troubled to acquaint themselves with the philosophy and traditions of geography, as honourable as those of any subject and which go back to the ancients; they have ignored the fact that, after pioneer work in the eighteenth century, the subject received, in the nineteenth century, form, content and principles to which a long list of masters contributed and adhered. Hettner in Germany, Mackinder in Britain and Hartshorne in the United States, have carefully formulated and cogently presented these principles of geography. Their works do not set forth their own personal opinions, but result from intensive and scholarly studies of geographical theory and practice as evolved through two thousand years and more. While there is, of course, place for informed philosophical discussion and intelligent questioning, there is no excuse at all for the irresponsible and pretentious claim of some geographers to re-define the subject for their own purposes and in ignorance of the already accumulated body of philosophy. As Hartshorne points out:

> In contrast with the purely personal expositions of each individual geographer's concept of the field that characterize so many of the methodological addresses of English and American geographers, a

> large number of the studies by German students of this problem are based on a scholarly consideration of previous treatises and of the course of historical development of geographic thought.
>
> (*The Nature of Geography*, p. 136).

It so happens that most of the great geographical philosophers have written in German, just as so many of the great regional geographers have written in French. Unfortunately, many English-speaking geographers, including some who hazard opinions of what geography should be, cannot read either language and there are universities where men may graduate in geography without this facility. It is therefore not surprising to learn from Hartshorne that 'the great majority of English geographers appear completely unaware of the developments in German geography since Ratzel'. Yet it is difficult to see how geography can be cleansed in Britain and America until we have students who are conversant either with the precepts of the German philosophers or with the practice of the French regionalists, and preferably both.

Geography is basically description, just as history is essentially narrative. The phenomena or objects found in an area of the earth's surface are as the events or 'dates' found in a period of time. The ancient and medieval writers of geography included much that was fanciful in their descriptions, just as the old historians wrote narratives that were highly imaginative. Gradually, beginning in the seventeenth and eighteenth centuries, and more particularly in the nineteenth century, a new and more scientific approach was applied to both subjects. Geographical and historical facts were established by evidence and observation; relationships of cause and effect were perceived; patterns of events and of phenomena gave rise to historical periods and geographical regions. Thus, following a similar path to that taken by history, modern regional geography has grown out of the romantic descriptions of the ancients. As Hartshorne puts it, 'Simple description has been replaced by an interpretative description which looks for causal connections'. The final art of the geographer is so to weld the features, physical and human, that make up a region into an integrated whole, as to bring out its 'personality'. To achieve this final synthesis requires literary ability as well as geographical training; in this, literary geographical description resembles literary narrative history. Many historians, otherwise sound scholars, do not have this supreme talent; but there have been enough of them

so gifted, in each generation, for the British Clio to hold her head high. English-speaking geographers, on the other hand, have utterly failed to produce great literary descriptive regional geography. To read the regional geography of the British Isles, one has to know French or German. And for North America one must turn to the French geographer, Raoul Blanchard. Mr. Tudor David can with justice scoff that our geographers 'parade *seriatim* the facts of relief, climate, economic geography, *et cetera*'. But he errs when he adds that to this pedestrian treatment under successive systematic headings 'there is no alternative; his material cannot be handled in any other way'.

Such an assertion is demonstrably false since many geographers, notably of the French school, have written in a very different way. However, Mr. David confidently asserts that 'there can be no such thing as a "regional synthesis" ', because he, with his limited reading, has not encountered one. There can, he concedes, be historical syntheses, because 'facts and influences are unified in relation to a human community in the course of its development . . . Humanity is, so to speak, the cement of the synthesis'. But geography, because 'its cement is area . . . clearly cannot construct edifices which will stand comparison with those of the historian'. 'Area', he goes on to explain, 'cannot have the binding properties of humanity because the data and the factors which bear upon it . . . are not necessarily related to one another.' What nonsense this is! The human data and factors which make up a period of history are no more 'necessarily related to one another' than the geographical phenomena within a region. It is 'time', not 'humanity', that is the factor in history corresponding to 'area' in geography. And geography has its 'binding cement of humanity' as much as history, although since Mr. David seems to have derived his idea of geography mainly from Professor Wooldridge, he may perhaps be forgiven for not understanding this. Man is so closely entwined with his environment that not even the historian can properly neglect the relationship; and for that very reason, the first volume of Lavisse's monumental *Histoire de France* was devoted to the regional geography of France, a masterpiece of geographical synthesis by Vidal de la Blache which won the general acclaim and respect of scholars in other disciplines and which gives the lie to the accusation that geography 'clearly cannot construct edifices which will stand comparison with those of the historian'. Vidal de la Blache's chapters outshine most of the ensuing historical writing.

Even a short quotation from this brilliant work may show how a region can be integrally described in such a way as to bring out the relationships between the facts found together in an area, and so portray its peculiar individuality as a region. The author is describing the Boulonnais, the French counterpart of the English Weald:

> On en gravit lentement les bords par des rampes uniformes et pelées, que signalent au Sud, de grandes fabriques de ciment: tout à coup un paysage se découvre, verdoyant, accidenté, entièrement différent du bourrelet crayeuse qui l'enveloppe. C'est que la venue au jour de couches plus variées et généralement plus tendres a permis au travail des eaux de sculpter inégalement la surface, de créer un modèle où la diversité des affleurements se traduit par de fréquents niveaux de sources. Bois et prairies se remplacent tour à tour; des riviéres courent avec rapidité sur des lits pierreux; des haies vives, où le houx se mêle souvent à l'aubépine et aux saules, encadrent de petits chemins, tandis qu'un peu partout, mais de préférence sur les hauteurs, s'éparpillent des maisons longues et bosses dont les fénêtres se décorent de fleurs et qui revendiquent chacune leur parcelle de vergers, de près ou dẽ champs.
>
> Quelques roches plus dures, d'age jurassique, sont demeurées en saillie, en forment, près de Boulogne, le mont Lambert ou les falaises calcaires du Gris-Nez. Mais au nord, vers Marquise, l'intensité du bombement a été poussée a tel point que ce sont les roches primaires elle-mêmes qui apparaissent: les mêmes schistes, les mêmes marbres qui depuis l'Ardenne semblaient définitivement enfouis dans les profondeurs. On a dans une échappée subite, sur la croupe nue et battue des vents qui domine les carrières de Marquise, la brusque et courte vision des landes, pâtis, et ajoncs. Instructive et fugitive reminiscence! Quelques pas de plus et vers Landrethun on atteint de nouveau la crête de bourrelet crayeux; de la une vue immense se découvre. C'est le pays plat qui descend et fuit vers Calais, se perd au loin jusqu'à la bande grise de la mer du Nord. (1903 ed., pp. 81-5.)

Mr. David has erred in assuming that the failings of his British prey are part of the nature of geography itself. It is as if a Ruritanian, finding the teaching of mathematics in Ruritania unsatisfactory, should urge the removal of mathematics from the curriculum. The same mistake is made in his attack on systematic geography as practised in Britain and America. He has no difficulty in showing that it usually amounts to studying the geographical aspects of other subjects and that the course followed and the examination questions asked in those university departments of geography where the

systematic approach prevails 'might equally well have found a place in the botany, economics and history schools respectively'.

Systematic studies have their place in geography, and the great masters of regional geography themselves have had their own special interests: e.g. Vidal de la Blache and de Martonne in France, Maull and Philippson in Germany. Such systematic studies are necessary before regional geography can be written. The trouble has been that they have become ends in themselves rather than means to an end. This danger was seen by the great founders and builders of modern geography. Hartshorne quotes Humboldt as stressing the point that, even when the approach was systematic, care should be taken to look at the special category of objects in their relationship to the other geographical phenomena in the area, and not as a distinct specialist field; Hettner warned that 'the geographer who works only in systematic geography and does not cultivate regional geography, runs the risk of leaving the field of geography entirely', and Mackinder feared 'the strong temptation for the Professor of Geography to pursue his investigations in some borderland'.

These fears were only too well grounded. The painful truth is that many in the university geography schools have, as Mr. Tudor David has shown, under the guise of teaching systematic geography, usurped geographical positions to do work more properly belonging to geologists, geomorphologists, meteorologists, botanists, agronomists, economists, historians, etc. As a result, the rapid growth of university geography has been more apparent than real.

It is an unhappy symptom of this disease in geography that most appointments to university posts are to lecture in some systematic violation of the integrity of geography rather than in the geography of an area. It is normal to find a man appointed to teach, say, economic geography, which an economist could do as well, or geomorphology, which a geologist could probably do better; it is unusual to come across an appointment of a man to teach the geography of say Africa or the Soviet Union. Yet the man who has steeped himself in the lore of one part of the earth's surface, and who has made a special study of those aspects of it which are mutually influential, has a unique contribution to make, which cannot be said of the worker who is clinging to the geographical skirts of some other science. To say that there has been a strong tendency by geographers to become specialists in the geographical aspects of other branches of learning is tantamount to saying that there has been a flight from true geo-

graphy. Specialization of that kind is the antithesis of geography. One cannot, for instance, study political or economic geography in the abstract as one can study political science or ecomonics; unless it is to be merely politics plus maps or economics plus maps, it must be studied in its connection with all the inter-related phenomena, physical and social as well as political and economic, found within an area. Thus it comes back to integrated regional geography, though with an emphasis on political or economic factors.

Yet another way in which English-speaking geographers have raised doubts as to the value of their subject has been by claiming that geography is a science in the same sense that meteorology, botany and biology are sciences; that it therefore must limit itself to the observation, classification and explanation of visible data, using the same procedures as the physical scientist. One motive for this claim seems to be the practical one that government research grants are made more liberally towards the sciences than to the humanities. Thus, in the United States, geographers have succeeded in pushing their claim to be an 'earth science' along with geology, and the National Research Council has a Division of Earth Sciences which provides financial support for 'geographic field research in foreign areas'.

The view of geography as a physical science was spared by Mr. Tudor David, but received a devastating blast from Dr. Scorer. There is no doubt that this critic has put into words what scientists in British and American universities have long thought of the status and aspirations of their geographical colleagues. Again, the fault lies not with geography as a subject, but with some of its practitioners, because their claims do not accord with the development of geographical philosophy; Hartshorne, as a student of geographical thought, has dealt with them as effectively as Scorer. Humboldt had made the distinction between geography and the natural sciences so clear that there has never been any excuse for its subsequent confusion: whereas the natural sciences 'study the forms, construction and processes of individual animals, plants, solid objects or fossils' and seek to arrange these in classes or families 'according to their internal analogies', geography is concerned with these objects as they exist together, related to each other causally in an area or *Raum*; unlike physics or botany, where 'the objects of nature are divided according to kinds of objects', geography sees all the objects as a natural whole, and when Dr. Scorer says that geography is no more a 'science' than history, he

comes very close to the actual words of Humboldt. Mackinder, who introduced modern geography into Britain, wrote:

> Let us grant that, apart from certain aspects of its technique, geography is not a science in the sense that physics, chemistry, biology and even geology are sciences. Nor is it of the humanities like history. It is something apart—a concrete philosophy with both scientific and humanistic roots, though with its own technique, both of research and expression.
> (*Geographical Journal*, vol. 86.)

There are British and American geographers who are as perturbed as their critics about the activities of the would-be scientists. Dean N. Scarfe, for instance, writes:

> We suffer in our universities from an overdose of pseudoscientific geographical verbalism which tries to reduce the subject to a few simple rules or fundamental principles from which by inspired guesswork, we could work out the geography of any region. There seems to be an inordinate search for factors which control or determine or favour this, that or the other. Climatic types, idealized continents, limiting factors and many such terms all devitalize and disintegrate geography.
> (*The Canadian Geographer*, No. 5.)

Many geographers would agree with Dr. Scorer that 'scientists simply cannot accept into their fold people who proceed this way'.

The purpose of this article has been to show that justified criticism of English-speaking geographers should not be allowed to obscure the academic and practical value of geography as the study and interpretative description of areas, and that far from abolishing the study of geography in universities, it should be so reformed as to be able to make the unique and invaluable contribution to learning which it does elsewhere; that it should train students in the examination of some part of the earth's surface and in the special study of those aspects of it, drawn from other sciences, which are mutually influential, so that they should be able to speak with authority on questions relating to that area. Furthermore, the training of students as specialists in *areas* rather than in the unrelated geographical aspects of a medley of other subjects, would provide industry, commerce and government with invaluable material. Too often our 'experts' on foreign countries are trained primarily as political scientists, historians, economists, linguists or even as journalists; they tend to see problems as constitutional, economic, historical, nationalistic or

merely sensational. The regional geographer is not merely another expert with another point of view; if an able man—and more so than the specialist or systematic geographies, regional geography requires men of ability—he will see all the various special aspects as related parts of a complex organism which functions by using opportunities and overcoming difficulties inherent in the environment.

When a crisis develops, such as that in Korea or more recently in South West Asia, professional geographers are very seldom among the authorities consulted by governments and interviewed by press, wireless and television; more often it is soldiers, diplomats, free-lance travellers, journalists, oil-company men, missionaries, archaeologists, etc., who are called upon to paint the local scene and account for what has happened there. In the universities, in the absence of vigorous schools of regional geography, schools of regional studies—Pacific studies, Arctic studies, Slavonic studies, etc.—are increasingly arising to meet the need for authoritative areal knowledge. It might be objected here that the field of these schools is too broad for geography to fill because, in Mr. Tudor David's words, 'a synthesis which sticks to area as its unifying principle is bound to exclude large facets of human activity—the aesthetic and literary, for example, which may have no areal significance, though they may be vital to the proper understanding of the character of the region's inhabitants'. This is, of course, quite wrong. The natural environment of the artist is sometimes an obvious and often a more subtle factor in his work; it is obvious if he is a landscape painter or a poet of nature, a regional novelist or an architect designing for local stone; he would be a poor regional geographer who failed to examine such 'facets of human activity'. But Mr. Tudor David may be forgiven his misprision here, for where can he find such regional geography in Britain? The places of those who might practise it are occupied by those whose efforts, as Mr. David puts it, 'properly belong to other disciplines'.

Honours courses in geography as arranged in most universities have been adjudged unworthy by the critics and they certainly will not produce the men with authoritative inter-related knowledge of parts of the earth's surface envisaged above, nor men trained to acquire such knowledge. If this ideal is to be achieved and if future criticism is to be avoided, then the following ingredients will be needed: some study of the nature of geography, using original authorities such as Hettner; basic instruction in the skills of map-reading, air-photo interpretation, statistics and cartography, so that

the student is equipped to make his own studies instead of the stultifying process of taking notes from uninspiring text-books; some knowledge of the geology, history and institutions of that part of the world in which he is to specialize; a reading facility in the language predominating in the selected area; and finally, and above all, the intensive study of this area, using the skills and knowledge already acquired, and involving original work, systematic studies within the limits of the area, and attempts at integrating these into regional syntheses under the guidance of tutors who themselves are authorities on the region.

Geographers are often criticized for vagueness, woolliness and lack of specialization. Dr. Scorer writes:

> If geography is to be taught at all at higher school level and attract good enough students to acquire status (at present it is unfortunately, but deservedly, regarded as a soft option) it must be by specialization, otherwise there is no challenge to the alert adolescent mind. It is by specialization that historians and other non-scientists obtain scholarships. But I suspect that if this policy were pursued it would soon be discovered that the older established disciplines have a better claim on the adolescent mind from the educational point of view.

How can Dr. Scorer be shown to be wrong? Not by further narrowing specialization along systematic lines, since the essence of geography is integration, and the more intensive the specialization in systematic geography the greater the encroachment upon the subject of which it is the geographical aspect. The only answer can be by specializing in areas or regions, just as the historian specializes in periods, and by becoming an unquestioned and respected authority upon them, so that it is to the geographer that men turn for a clear and sound understanding of regional problems. I would suggest that, if this policy were pursued—to rephrase Dr. Scorer's words—'it would be discovered that geography has at least an equal claim on the adolescent mind from the educational point of view'.

Professor E. W. Gilbert, speaking of geography at Oxford, has written:

> Just as the Honour School of Literae Humaniores, by combining Literature, Philosophy and Ancient History, endeavours primarily at training men in an understanding of the structure and nature of the Graeco-Roman world, so the Honour School of Geography, by draw-

ing from a variety of subjects, endeavours to provide an integrated study of the environment of modern society.

(*Geography as a Humane Study*, p. 8.)

This comparison is apt. For the many centuries that European civilization rested upon Mediterranean foundations, an education founded on Greek and Roman studies and on the Scriptures, was well suited to such a civilization. But now that the old civilization is being rapidly transformed under the impact of successive industrial and technological revolutions, and now that the known world has expanded to embrace the whole globe, the chorological and integrated study of the modern world has a foremost claim to provide a liberal education for modern man. In a culture beset by the dangers of specialization, it offers a unique meeting-place for many branches of knowledge, and even when it does specialize by narrowing its view to a minute portion of the earth's surface, it retains, in its regional concept, the whole range of phenomena capable of 'areal differentiation'. Would not such a study, the logical culmination of the philosophic development of geography as seen by Kant, Humboldt, Ritter, Hettner, Hartshorne and others, be too precious to lose?

NOTE

[1] *Weather*, October and November 1957; May 1958. *Journal of the Town Planning Institute*, June 1958.

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Philosophy at the University of Tasmania

The following resolution was passed by 28 votes to nil, with 3 abstentions, at a special Council Meeting of the Australasian Association of Philosophy held on Monday, August 18th, 1958. (The meeting consisted entirely of teachers and research workers in Philosophy in Australia assembled in Canberra for the annual conference of the Association, and all the members of the Council present at the conference were present at the meeting.)

Because of the actions of the University of Tasmania leading to the summary dismissal of Professor Orr, and of subsequent official statements of the University, this Council of the Australasian Association of Philosophy, believing these actions and statements to be contrary to academic tradition, cannot, while the present position persists, commend the University of Tasmania to its members as a suitable place of employment for a teacher of Philosophy.

UNIVERSITY GOVERNMENT— BUT BY WHOM?

G. E. AYLMER

Lecturer in History, the University of Manchester

ON the whole this article takes for granted the purposes for which universities exist, and deals instead with the ways in which they are run. But university government is only worth discussing because universities are supposed to be 'communities' of learning. And it is arguable that the way most of them are at present governed, by stratifying their academic staffs to an excessive extent, has a harmful effect on them as academic communities—and so, indirectly, on the students in them as well as on the staff. The author is well aware of his own inadequacy and his inability to do justice to the subject. His own experience has been limited to three years as a very junior member of the governing body of an Oxford college and four years as an assistant lecturer and then a lecturer in a provincial university.

It will be well to start with a bald proposition. Whatever their constitutions may look like on paper, all British universities, with two possible exceptions, are run by small groups of people, and the great majority of their respective teaching staffs have very little if any share in running them. Is this true? If true, is it inevitable? If not inevitable, is it desirable? If neither inevitable nor desirable, what can be done about it?

Despite differences of nomenclature, in all English provincial universities and university colleges the basic pattern of government is the same. There is a chief executive—the vice-chancellor or principal—and there are two collective bodies or assemblies. One of these, usually called Council, includes representatives of the teaching staff but is mainly composed of outsiders, men and women who have made their name in other walks of life; the other, Senate, is a purely academic body, consisting of all the professors and in most cases of a very few representatives from the rest of the teaching staff. The proportion of non-professors on Senate varies widely, from over one third at Exeter to nil at Liverpool and Manchester. Below come the faculties, comprising all members of the teaching staff except assistant lecturers and in some cases the more junior lecturers. In some

universities the operative bodies are the faculty boards, as distinct from the faculties, and on these non-professors have representatives only, or else sit by rotation. Faculties are of course in turn subdivided into departments, each of which is normally presided over by a professor, or a group of professors, one of whom is often but not always the 'head of department', either by virtue of the particular chair which he holds or by seniority.

The vice-chancellor or principal is a member of Council but not its chairman; he is normally the chairman of Senate. In some institutions the registrar, the second executive officer, is also the secretary of Council; rather more often he is secretary of Senate, and in one or two instances of both. Although he is not normally a member, the third executive officer, the bursar, has an especially close relation with Council, since they—within the limits set by the Chancellor of the Exchequer and the Universities Grants Committee—hold the purse strings.

So far so good. What is to be found on paper, in the Calendars, etc., corresponds with reality. But at least in the larger institutions most decisions are in practice taken by committees, of Council, of Senate, and of Council and Senate jointly. In several cases Council and in most cases Senate are too big for efficient conduct of business. The same is true of faculties. In a gathering of over fifty people, or even over 25-30, it is possible to have a debate, but not to initiate a policy or discuss its details. For this there are many reasons: lack of time, and the chairman's attitude are two. This probably matters less in Council, which tends in any case to be rather more of a ratifying and less of an initiating body than Senate; also in the bigger universities Senate is two or even three times as large a body as Council. Senate therefore tends to delegate a considerable part of its power to a standing or executive committee. Much the same is true of some over-large faculties, and it may in practice even be true of a few departments. In every case, as far as effective decision taking is concerned, it is the committee, or the 'inner ring', which counts.

Thus there is a good case for supposing that university government is more oligarchic than would appear to the outside observer. Among the most salient characteristics of this oligarchic system would seem to be:

(i) the complicated overlapping membership of committees, with certain professors' names recurring on most of the important ones; some, but not all of these committees have rotation of membership;

(ii) the relative impotence of many professors, sometimes even of heads of departments, if they are not well placed in the committee structure;

(iii) wide variations in the real power of the vice-chancellor and the registrar, depending largely on the accidents of personality, and on their personal relations with the leading members of Council and Senate;

(iv) in the larger and older provincial universities the virtual absence of any role at all, except at the faculty level, for the non-professorial members of the teaching staff; and even in faculties the effective domination of a professorial clique operating again through the committee system;

(v) the often deceptive appearance of the 'departmental' system; a department may have upward of 20-30 members, with all the significant decisions being taken by two or three professors, often without even consulting most of the others. One exceedingly bad result of this is that the students become aware of the lecturers' ignorance and lack of responsibility concerning matters of university policy, and come to regard them as 'mere' teachers; this in turn is bad for student morale and militates *against* the sense of belonging to a community.

From these basic features of the system others appear to follow, if not inevitably, at least in practice, in most institutions:

(i) the passion for secrecy which develops in the higher ranks, often over matters where it is patently ludicrous, e.g. university expansion in the mid-1960's; or over questions on which the university and the public have a reasonable right to be informed, e.g. departmental expenditure;

(ii) the tendency among professors who are well placed in the committee structure to indulge in 'empire building', that is to seek to enlarge their own respective departments, often with little or no regard to general university policy;

(iii) the concomitant phenomenon of 'log rolling', that is the mutual doing of favours, whereby Professor X supports Professor Y's request for an extra assistant lecturer on one committee, and Y supports X's request for more lab space or another teaching room on another committee.

Up to a point (ii) and (iii) are simply the way of the world, but they are likely to be at their most highly developed, and least controllable, in an oligarchic structure of overlapping committees (for

instance the United States senate). (i) is a characteristically silly product of oligarchic government, particularly since the secrecy is much more from the junior members of staff than from the outside world. This is not of course to deny that in such matters as appointments, promotions, real estate transactions, and the placing of contracts secrecy may be necessary at certain stages.

Assuming the number of people in each university with any effective share in the making of policy to be very small in relation to the total teaching staff, could this be otherwise? For, if it is unavoidable, it is otiose to discuss whether it is a good or a bad thing. Like the climate we must just put up with it.

It can of course be argued that wider staff participation, more decentralization, and more open discussion, if not actually impossible, would lead to far less efficient management. In the absence of any intermediate units, such as the Oxford, Cambridge, and Durham colleges, there is only the department and above it the faculty between the individual lecturer and the university. The London colleges are too big to be thought of as intermediate units; after all, some of them are bigger than most provincial universities. With a full-time teaching staff running into hundreds, even if a suitable institutional framework existed, it would not be possible for all to participate either in the shaping of policy or in administration, i.e. the implementation of it. Not only this, but in the larger of the universities without sub-units the point is rapidly being reached where not even all the professors are in practice policy makers; they are becoming in effect departmental administrators. Whether by means of a rota system, or by some less formal kind of 'natural selection', some of them are members of the ruling oligarchy and others apparently are not. How ridiculous therefore to suppose that all the lecturers could have a share in running things!

This argument can be extended. Not only are governing bodies already too big, but whatever our theoretical beliefs in democracy and its virtues, in any institution, be it a college, a business firm, a government department, a school, or a hospital, there has got to be a chain of command, in short: masters and men. You cannot, as many revolutionaries have found, run an army composed entirely of generals. *Ça ne marche pas.* University government is not oligarchic because of any fault on the part of the oligarchs, or any failing on the part of the other teaching staff, but because of the facts of life.

How far is this true? It is necessary first to consider the distinction

between policy-making and administration. To share out the duties of registrar among six co-registrars might be exceedingly inefficient; but it might be perfectly efficient, were it institutionally possible, to increase the number of people involved in policy-making. Granted that Council and Senate are already in many cases too large for detailed discussions to be carried on in full session, would they necessarily be much the worse for some further enlargement?

It is also necessary to distinguish between wider staff participation in university government and equal shares in it for all. A junior fellow of an Oxford college is a member of its governing body and of Congregation, the university's general assembly. But no one supposes that he counts for as much as the head of a college, or the Registrar, or the senior members of Congregation who are elected to serve on the Hebdomadal Council. Likewise in provincial universities. It is neither possible nor desirable for individual lecturers to count for as much as individual professors. But it does not follow from this that it is impossible for them to have any larger share than they do at present.

If it were possible, would it be desirable to give more members of university staffs more participation in their government? Although it might require amendment of their statutes, there is no reason why provincial universities should not have general assemblies on the lines of Congregation in Oxford, or else greatly enlarge their existing governing bodies. Would this prove so inconvenient as to be, for practical purposes, unworkable? It is hard to believe so. Are Oxford and Cambridge, for all that can be said against them, more inefficiently run than other British universities? Are the larger provincial universities, with the bigger Councils and Senates, more inefficiently run than the smaller ones, whose governing bodies have fewer members?

The problem of whether or not more staff participation would be desirable can perhaps best be approached by asking what are the real obstacles to its coming about. In honesty a two-fold answer must be returned. The first reason is that those who at present run the universities do not want it to happen, and the second is that most of those members of the teaching staffs who have no share in running them do not want to have one, or at least that their silence implies consent to the existing order.

The first reason is not to say that we are in the hands of power maniacs or wicked men. It is simply, that in any system or institution

those who have power normally prefer not to share it with others, still less to divest themselves of it. As will be seen, the second reason to some extent begs the question: the non-professorial teaching staff may *appear* apathetic chiefly because they have no means of expressing their desire for a share in university government, *or* because under the present system they believe it to be impolitic to express any such desire, *or* for a mixture of both these reasons. On the other hand there is regrettably good evidence (from A.U.T. and other staff meetings) that many of them are just not interested, or else think that it is none of their business.

In considering the merits of the existing system, there are two quite distinct though interrelated issues involved:

(i) the proper division of powers and duties between the teaching staff, or their representatives on the various governing bodies, and the executive officers (vice-chancellors, registrars, bursars, and their respective assistants);

(ii) the antithesis between those members of the teaching staff who are best qualified and most willing to share in the work of university government and their apathetic colleagues, which may or may not correspond in practice to the distinction between professors and non-professors and to the present distribution of power between them.

In theory the position of registrars and bursars is not in dispute, in so far as their business is with administration and not with policy-making. But this is an utterly unreal distinction. And many registrars and bursars are simply *too able* for it to be sensible, or indeed possible, for them to restrict themselves to routine administrative matters. Many of them are abler, as well as being better informed and harder working, than most members of the teaching staff. Inevitably expert knowledge means influence. Some committees are bound in practice to be largely swayed by the expert guidance of e.g. the bursar. This however does not mean that registrars and bursars should themselves be members of an inner oligarchic élite, too often acting not as expert advisers and channels of information but as policy-makers and decision takers in their own right. It is seriously arguable that some university registrars, and perhaps some bursars too, are men whose ability is in excess of what the job requires, at least if the fiction is to be maintained that they are 'mere' administrators with no role in policy-making. The vice-chancellor's or principal's position is rather

different; unavoidably he is partly concerned with routine matters, but much more with policy-making, overtly and quite rightly so.

The division within the teaching staff is a more difficult question. There is no doubt that some people like running things more than other people do. However much they may piously protest, they actually enjoy attending committees and arranging things. But are they necessarily the ones who are best at it? The world in general would surely be in a rather better state than it is if all those who liked exercising power and influence over other people, and in the management of affairs, were in fact those best fitted to do so. It may be argued that in a scholarly community some people emerge as 'natural' committee men with an aptitude for business, and that others inevitably remain 'pure' scholars, perhaps just capable of teaching but utterly unsuited to the conduct of practical affairs. Yet in real life the absent-minded professor, who is so completely bound up in his subject that he is unable to cope with any practical matters, even if he gives them his attention, is probably about as rare (or common) as the authentic power maniac at the other extreme. In between these two rather unreal extremes it might be a good thing if those who enjoy committees were occasionally kept off them and those who dislike them were sometimes put onto them.

Then there is the argument that it is not temperament or preference but rank and seniority that count, and rightly so. Lecturers, it may be said, are too young and inexperienced to share in university government. This feeling is likely to remain unspoken by those who defend the present system. Plainly it has to be qualified so much as to be almost worthless. Some people change a great deal, in character and outlook if not in ability, between the ages of say 25 and 45; others very little. Some people learn from experience, their own and other peoples'; others regrettably do not. To make age and experience in themselves the criteria of fitness to share in government is not rational. Rank is another matter. In so far as professors are the ablest members of their departments and the élite of the profession, this is a forceful argument. Supposing that by and large this is so (in itself a disputable proposition), it would only justify the present system of university government on the assumption that the intellectual, or academic, élite is the best fitted to constitute the ruling minority. This is an arguable proposition but by no means a self-evident truth.

One of the most pressing problems, and probably one which has the worst effects for the students, is the gap between professors and

the rest of the teaching staff. A crucial weakness of the present system lies at the point of transition from non-professorial to professorial rank. This does not apply so much to professors who come to provincial universities from Oxford or Cambridge; assuming that they have already been fellows of colleges they will have had experience of university government and administration at its different levels. But what of the rest? Can it be good training for the future members of senates to have no share at all in these matters until they are forty, or whatever the average age may be at which professors are appointed? Some may have been schooled by their long apprenticeship, and be safe men, easy to get along with on committees, and adept in the art of not making trouble; others may be all too eager to gratify the pent-up frustrations of decades. In either case will they be the people to re-think, and perhaps re-shape, the universities of this country according to the needs and possibilities of the age, while at the same time standing resolutely for what they believe to be the true purposes of university education?

In practice there is wonderfully little debate about all this. The existing system is virtually never called in question when more than two or three are gathered together, and then only when no professor is within earshot, unless it is among the professors themselves. The arguments for the present system do not need to be developed, since it is never overtly challenged. The arguments against it are left unspoken partly out of sheer ignorance as to how it does work, partly out of laziness and indifference, but partly also out of prudence. It is probably quite untrue that a junior lecturer who gets a name with his superiors for being interested in these dangerous topics, is seriously jeopardizing his future career, but this seems to be quite widely believed in the lower grades. It may be felt that someone of exceptional and outstanding ability in their own field would overcome such a handicap, but that for those who are able without being outstanding it could well prove decisive in spoiling their chances of promotion. Some lecturers are perhaps all too morbidly aware of this. Many others however are so taken up with research, teaching, and other interests that they give the impression of taking entirely for granted that the university 'runs', and never seem to ask themselves who runs it or how.

The case for participation by the non-professorial teaching staff does not involve any sweeping condemnation of the existing system. Still less does it imply any kind of personal attack on the vice-

chancellors, registrars, bursars, and the minority of active and influential professors who run the universities at present. The case for reform rests on belief in the democratic process—in government by consultation and consent, in 'two heads being better than one', and —up to a point—in the freshness of youth; the case against it on belief in rule by the few, centralization, and seniority.

Finally it is not possible altogether to evade the wider question of what a university is and what it is for. If it is accepted that a university should be a community of learning, and not just, as it were, an academic factory or assembly line, then it is clear that most provincial universities are failing badly at present, indeed that some scarcely deserve the name. It is precisely here that the more junior members of the teaching staff could make a vital contribution; and it is here that their role will become progressively more important if the present tentative programme of university expansion is adhered to over the next 20-25 years. Unless the government of universities is to pass more and more into the hands of full-time administrators, and unless more and more professors are going to have to give up their own research altogether as the price of promotion to that grade, some less centralized and less rigid system must surely be found.

Any specific suggestions which the present author is able to make here are likely to be open to the charge of being unpractical; nor are the problems and the priorities the same in all institutions. Only a few lines of thought can be suggested, all of which can certainly be improved upon. Other people, it is hoped, will have their own suggestions to make.

(i) Provincial universities no longer receive the bulk of their funds from local or regional sources; in recognition of this the present 'lay' element in councils should be reduced to say half. At the same time the number of non-professorial academic representatives should be increased.

(ii) For senates some kind of rota system should be worked out, with perhaps one professor and one non-professor from each department; or else representation should vary according to the size of the department. In some of the larger and older provincial universities the statutory non-professorial representation on Senate bears no relation to present numbers or to the present ratio between professors and other members of staff.

The net effect of measures (i) and (ii) should be that *any* member of the teaching staff of more than say five years seniority should have

a chance, if he shows an active interest, of a three-year term on either Council or Senate. This is hardly to ask for the moon!

(iii) In faculties and departments there should be more scope for the more junior members, perhaps with some regular machinery for their consultation, instead of this being left to the goodwill of individual professors. So far as possible faculties should have more power, and there should be greater equality among their members.

(iv) Serious consideration should be given to a plan for more sweeping reform, replacing the existing 'Court' (largely laymen and a purely formal body) by a general assembly of the teaching staff, comparable perhaps to the General Board of Faculties which already exists in some institutions, but appears to have few functions.

(v) If the assembly in (iv) was to be not merely an advisory body but one with actual powers, there would be a case for reconstituting Council or Senate, or both, on a *partly* elected basis, plus *ex-officio* and co-opted members; on both these bodies some sort of balance should be preserved between professors and non-professors. It is impossible to discuss the future of Councils without taking up the vexed question of the lay element; were this to be eliminated, there would be a strong case for having one large deliberative body and only one (fairly small) executive body presided over by the vice-chancellor or principal.

To be worth anything, these or any other measures must be accompanied by changes of attitude on the part of rulers and ruled alike. Those who at present bear a perhaps disproportionately heavy share of the burden of university government must cease to regard the junior members of staff with their present mixture of irritated suspicion and amused tolerance; the rest of us must galvanize ourselves out of our state of timorous and cynical apathy; and finally no one must expect the walls of an oligarchic Jericho to crumble and to reveal the lineaments of a democratic Utopia.

THE INTERPRETER'S TASK AND TRAINING

EVA PANETH

MACHINES tend to make human agents dispensable rather than provide new possibilities for the exercise of human skills. But the provision of facilities for simultaneous interpretation by Gordon Finlay in 1926 has given men the chance to exercise a faculty that an astonishing number possess and must have possessed throughout the ages without previously having been aware of it. That the human mind should be capable of taking in a thought in one form (say French) and to give it out practically simultaneously transformed into another (say English) is a phenomenon that is all too little explored—though it is already exploited—and that needs to be explained. When a translator faces a printed text and transfers it into another language on his pad, there may or may not be a step by step progress from one to the other (probably the process varies with different individuals), but there is the possibility of going back over earlier passages, of jotting down words for future consideration or rejection, of the consideration of turns of phrases in a wider context, of revising one's verdict as to the suitability of a particular translation. What makes simultaneous interpretation at its best so interesting is that it cannot be achieved by this disintegrated transference and repeated reconstruction of elements. The simultaneous interpreter who receives a speech in French over his earphones, can only pour into his microphone a simultaneous version in English if his mind does—what?

The instrument that Mr. Finlay has offered him is no more than this: a pair of earphones in a sound-proof box and a microphone connected to receiving sets in the conference hall. Inserted between the earphones and the microphone, the interpreter can relay to delegates in the hall the translation of a speech on the platform, with a delay that varies according to the individuality of the interpreter from practically nil at one point of the speech to some 10 seconds with other temperaments and at other points. The installation is simple—but what of the mental process that it makes possible in the interpreter?

He remembers the beginning of the speech, chimes in with the translation and listens to the continuation, all at the same time. At

some points he may be concerned with three activities simultaneously: remembering part of the earlier text, its enunciation in another idiom, taking in the further text that is being delivered while he deals with earlier parts. Most of the time he will lag slightly behind the original text, especially at the beginning, though some introductory formulae are so well known to interpreters that they may roll them off their tongue faster than the original speaker. How much time they allow themselves to take in less trite passages varies individually:

> Jean François Rozan a l'habitude de courir, sans se hâter, au moins une, et souvent deux phrases derrière l'orateur . . . Quant à moi, j'essaie de coller autant que possible à l'orateur, de sorte que cela devient un mot à mot. (André Kaminker, 'Conférence', *L'Interprète*, 1955, No. 3+4, p. 9.)

Even in the latter case the delivery is of course not completely simultaneous with the intake: a real *mot à mot* is impossible from one European language to the other; not only would the adjective in French, and even more so the verb in German, appear in the most extraordinary positions, the word itself will often not betray its intended meaning until it is set in a larger context. And the larger context may need a completely different form of expression in the two idioms, as in a proverb for instance.

It is very likely that, depending on the structure of the source and target languages, the length of the delay will have to vary and experiments should be undertaken to see whether the same interpreters show different time-lags with different idioms.

There is of course no time for a consideration of the version to be produced. The absolute automatism of the translation, the ability to produce an immediate French configuration of a thought taken in in English, is a pre-condition of the functioning of the interpreter. That there is time for some of them to do something else simultaneously, e.g. write a letter in Mr. Rozan's case (quoted in 'Dizziest Performers in the U.N.' by C. P. Gustavson, *L'Interprète*, 1950, 4) suggests that the response takes place at a subconscious level. This is further borne out by the fact that in general, once the trance-like translation process has set in, interpreters cannot remember the contents afterwards, and people who do get interested in the subject matter of the speech cannot make good simultaneous interpreters. Controlled experiments are needed to define that trance-like state more clearly: tasks set the interpreter, like the doing of sums or copying of texts while he is continuing his translation (which should be

checked by observers or tape-recorded for accuracy and quality), would elucidate the question how far he can let his conscious mind wander from the task with which his automatism deals. We are fortunate in having a description of this automatism by one of its most brilliant practitioners:

> . . . il n'est possible d'obtenir un bon résultat qua dans la mesure où l'on réagit à l'automatisme des mots pour ne suivre qu'une règle: celle qui consiste à ne prendre appui que sur la pensée de l'orateur, sur l'idée qui est exprimée et—c'est là la part de l'instinct dont doit être doué l'interprète simultané—sur l'idée qui sera exprimée. Car c'est seulement dans la mesure où l'idée est complètement et immédiatement assimilée qu' il est possible d'obtenir la précision nécessaire; les mots sont alors repris pour être replacés là ou ils doivent l'être dans la langue parlée de l'interprète, les images sont également transposées et la construction suit librement celle de la pensée et non obligatoirement celle de la langue originale. (J. F. Rozan, 'Remarques sur l'automatisme de l'interprétation', *L'Interprète*, 1953, 1 pp. 12+13.)

What is this *appui sur la pensée* other than the 'Gestalt' of the contents? Is not this translation a parallel case to Ehrenfels' example of the transfer of the 'Gestalt' of a melody from one key to another?

It is in its 'Gestalt' that the idea is assimilated. It has always seemed to me that in simultaneous interpretation the original text gives rise to an unexplored concept in the mind which then comes out in the new language. For both simultaneous and consecutive interpreter there intervenes between the language of the original speech and that of the interpretation a purely conceptual apprehension of the idea, which may be largely pictorial, symbolic, composed of a kind of *sigles* of the mind. It is not really simultaneous interpretation when language is still present at the intermediate stage. The feasibility of simultaneous interpretation is almost proof that thought is non-linguistic.

This most fascinating and, as a phenomenon, most puzzling form of simultaneous interpretation is usually only attained when the conference has been going for some time. Especially at the beginning or when picking up a slowly delivered technical text, the interpreter may have no chance to get into the swing of truly simultaneous interpretation; at this stage he simply uses a telephone installation to reproduce announcements and statements in another language, possibly in the pauses between their intermittent delivery. As the conference warms up, he may get into the stride of conscious simultaneous

interpretation, and produce a considered translation of what is being said, with a critical attitude towards his version and often conscious use of documentation as an auxiliary. At some technical conferences it may be impossible to go beyond this. But even at technical conferences it may be possible for interpreters programmed and conditioned to them, to relax completely and to let the text flow through them, allowing it to come out in the language to which they have switched without thinking about it or being able to reproduce it afterwards. One proof of the automatic response at this stage is the correct translation of terms in their context which the interpreter could not recall afterwards.

The 'Gestalt' school of psychology ought to have something to say on this transference of a configuration from one medium into another; the *gestalt*, the pattern (of the thought) is preserved, the mode of expression changed, not only into a different language, but possibly into the subjunctive, etc. What happens in the mind of an interpreter who further automatically reproduces the early bird catching the worm as the morning hour with gold in its mouth (*Morgenstunde hat Gold im Munde*)? (The real difficulty begins when the speaker makes the worm turn in subsequent phrases and the interpreter still has gold in his mouth.) As he transfers, does the interpreter have in his own mind a non-linguistic, non-visual conception of the underlying thought and is the English phrase conveyed to the central '*Registratur*' which pays out the German equivalent, or does it touch off the German response directly? Such questions run parallel to the problems posed by translating machines: should their intake be transposed into a neutral logical language from which retranslation into existing languages should take place or is it more economical to find the equivalence without intermediary? The two investigations, that of the interpreter and that of the most economical as well as of the safest (from the point of view of producing the minimum of errors) running of the machine, might be mutually instructive.

That the interpreter is not conscious of the elements of the speech but only of the thoughts conveyed, could probably be shown by such experiments as switching the original speaker onto the language into which the interpretation is taking place: the interpreted text would probably still be a rendering of the original and not a word for word correspondence, as the mental process of transposition of the configuration would continue in the interpreter.

There are, of course, transitions between the three stages and

experiments would have to be conducted carefully to concentrate on various aspects: it would be essential to make sure throughout that the translation is satisfactory, either by tape-recordings or with the help of trained observers.

This brings in the question of what constitutes a satisfactory translation, a moot point through the centuries, to which simultaneous interpretation contributes the aspect of the frame within which equivalence has to be achieved. For a literary work it may be sufficient to convey the same mood and contents within a page or even a chapter; but simultaneous interpretation must make it possible for linguistically heterogeneous groups to raise their arms at the same time when a vote is being taken, to join in the laughter with as little delay as possible, to associate the text with the appropriate gesture of the speaker (some very odd effects are achieved when the interpreters provide the explanation of the vivid gesticulations of the more temperamental speakers with undue delay).

While legend has it that the translators of what came to be known as the Septuagint produced identical versions of the bible text although locked up in separate compartments, it is very doubtful whether this would be the case with even a mere seven simultaneous interpreters in individual booths. A comparison of their tape-recorded outputs could be most revealing, even more so if, at a later occasion, preferably when the repetition would take them unawares, their own text could be fed back to them for retranslation into the original source language. Linguistic and textual deviations from the first text would give opportunities to study the only partial overlapping as opposed to the co-extension of terms in two languages, the permissible or excessive liberties taken in the changing of the phrases, the degree of divergence of the ideas called forth in the minds of the audience depending on the translator they listened to.

In actual practice other criteria will have to be taken into account as well: a pleasant speaking voice is essential; while speakers change, the delegates of smaller linguistic groups may be chained to one or two interpreters throughout the sessions.

At the present moment interpreters may have to commute between the booth and the platform or the committee table when consecutive interpretation is demanded. This may be due either to the absence of a simultaneous installation, which may be too expensive for the smaller meetings or numerous committees, or to a preference for this mode. In negotiations, many partners prefer a translation which

follows the original speech and thus allows them to assemble their thoughts and notes for a reply. The Security Council will not have its delegates' attention distracted by any translation during the original speech and then has one consecutive version delivered from the platform, which is translated simultaneously into the other official languages from several booths.

Neither form of translation should attract attention to itself. Unlike the Victorian child, the interpreter should be heard, but not noticed as a presence. Even '*As-tu entendu mon Briand?*' is the wrong question for a brilliant performer to ask at the end of his translation. Only Briand should have been heard; the intermediary should be as unobtrusive as possible and applause for the interpreter at the end of a *tour de force* in translation only shows that the attention of the audience has been attracted by what ought not to be noticed: the fact of there being an intermediary. A much greater triumph is achieved when the listeners are almost unaware that there is anything between them and the speaker, when they remember the speech as if it had come from the original speaker, as some do after listening to Dr. Schweitzer translated by his collaborators, whose manner and vision is completely subordinated to his thoughts: they see the same mountains, the same experience as he does, and as nearly as is possible in human communication they make the audience see them too and not the speech that communicates them. The consecutive version gives the fellow delegates of the original speaker a better chance to check its correctness and to judge its style. It is this matter of style which makes it more popular with the real artists among the interpreters. It is difficult, if not impossible, to improve on your original in simultaneous translation (and a good linguist and stylist can suffer agonies when driven into stuttering incoherence by a poor speaker); in consecutive interpretation the translated product may be superior in clarity of thought and forcible expression to the original. The question is, should it be?

The modern forms of 'interpretation' we have been concerned with so far have really been translation from one language into another; for the sake of convenience they are termed 'interpretation' when done orally, by the unions of those who practise them. Whether they partake of the hermeneutic function of interpretation is a point which needs discussing.

It certainly is not the business of the interpreter to elucidate a point left purposely vague, it is not for him to 'commit' the speaker.

He is not allowed to correct mistakes in the original speech either. Apart from the fact that his functioning may not leave him time for considering the contents, he has no right to convey to his audience information that differs from the original text; the discussion between different linguistic groups must be based on as nearly identical data as possible. Yet, to make them equally acceptable may need a great deal of tact on the part of the interpreter, who must be conscious of e.g. national susceptibilities which will make similar terms more offensive in one language than in another.

How can aspirants to the profession best be prepared to fulfill these manifold functions demanded of them?

To discuss this question we have to consider further the different levels at which interpretation is wanted. They vary from consecutive interpretation for top level negotiations and the international conference interpreted via ear-phones, through a whole range of meetings of international experts, to the discussions of small business or private interests between two partners. Interpreters are intercalated between speakers and audiences of thousands as well as between two partners to a telephone call between Frankfurt and abroad, for which the German Post Office can provide an intermediary who ensures that at each end the call is received in the language of the target country. This service might easily be extended to make it possible to dial INT for interpreter when a business man receives a foreign guest from abroad: all that is needed is the installation of twin telephones that can contact the same interpreters' pool and the guest from abroad will be able to converse with his host via an invisible interpreter. The staffing of such a service would be all the easier as the interpreters do not have to be present at any central office but need only be available via a central switchboard.

This scheme could help this country to compete with the advantages which Western Germany has gained in the commercial field, thanks to the services of its excellent '*Verhandlungsdolmetscher*'. The feminine suffix would be even more appropriate, as, in the large majority of the meetings, it is a young lady who introduces the foreign buyer to her boss, as well as to the plant or organization. These girls have usually learned just enough of the language and the goods to be able to deal with the ever-recurrent phrases in an idiomatic way and with the guests according to the conventions of their countries. They translate short questions and answers referring to the special branch

of the market for which they have been briefed; this amounts to a simplified form of consecutive interpretation in so far as its techniques are applicable to their shorter spells of translation (they are entitled to ask for frequent pauses for translation). Intermediate between these multi-lingual secretaries with a limited range and the top-level interpreters, there ought to be every variety of technical expert helping with interpretation. Whether, and how often, it should be the technical expert who has been induced to learn languages, or the linguist who has been given a superficial introduction to the technical subject, should depend more on a considered policy and less on their accidental availability than has been the case so far.

Whether the interpreting services of international conferences on, let us say, atomic energy or tanning, had better be staffed by experts in the language or in the subject, has been investigated all too little. Would it be simpler to train the physicists, chemists, etc., who know some languages to use them in interpretation or the interpreters to understand the chemistry, physics, etc.? Could the two groups co-operate more closely than has been the case so far? A liaison officer is occasionally, but still too rarely, available to brief the interpreters on the points at issue: a knowledge of what temperatures are critical and for what reasons will help them to recognize the figures mentioned more quickly and surely, even in indistinct pronunciations; familiarity with the points at issue and the protagonists of different theories helps the interpreter to phrase their queries in more intelligible ways. As such conferences have to be done in considered interpretation (the second stage) it may be that the reasoned, although abbreviated summary of an expert, broadcast over the cables from the interpreters' booths, will help the delegates more than the continuous flow of a mere linguistic translation. A joint staffing of the booths may make both alternation and mutual assistance possible and might be more fully developed if the interpreter and/or expert is given the chance to draw or write for simultaneous projection onto a screen. The technical aide could draw diagrams more fully labelled than those of the original speaker; a scientist, who could not interpret but who can translate his problems might scribble summaries of points at issue for projection and thus elucidate crucial points for puzzled delegates.

The assistance given by the written word might be further extended by having any contributions whose text is available projected in full or abbreviated translations onto the one or several screens. This was

done to the satisfaction of all concerned at a recent international conference at the Sorbonne. The versions offered can of course be more carefully prepared, possibly under the supervision of the original author, and any possibilities of misunderstandings can be more easily checked by bi-lingual colleagues in visual, than in audial reproduction. Too little experimentation has been carried out yet with the applicability of various approaches to the servicing of conferences and organizers might well be encouraged to be more adventurous in enrolling so far untapped human resources.

As we have seen, interpreting can be done at different levels and for different purposes, by secretaries within a specialized field, and by technical experts in their subject; translators are able to function as interpreters for their particular *rayon* as they do for the United Nations in Geneva; interpreters provide, over earphones, more or less prepared versions of plays acted in Moscow theatres. The conference room is not the only place where the conference interpreter, the fully fledged consecutive and simultaneous interpreter, can find employment; in addition to those mentioned there are the venues opened by interpretation of a foreign commentary on the wireless or television, or by a running translation of a tape-recorded foreign programme, mostly of news, when the time factor matters.

For these functions young people are being trained at Écoles d'Interprètes on the Continent where language teachers, actors, practising and former interpreters and translators, communicate to them their skill and their experience. As long as it is clear that different instructors help them to acquire different facets of it, the training can profit from the co-operation of linguists and other experts who themselves could not do interpretation, but who can give instruction in subsidiary skills as well as giving a valuable *Hilfestellung* for the interpreting performance, if there is agreement on the underlying and general factors on the basis of which interpretation can be achieved. They must be agreed for instance that an *Erfassen* of the whole text is essential to the interpreter's approach and that he should never indulge in any other. Thus the *Stegreif-Übersetzung* is what the translation lesson will aim at: the reading out of an English text in French with the same fluency as if it were being read in the original. This presents no problem to a real interpreter at all (though it does to many students), or to some hysterics who have been known to go through stages when they could only read out texts in other tongues than the ones in which they were written. (The most notable

case was that of Freud's patient Berta Pappenheim who 'when asked to read aloud from an Italian or French book would do so swiftly and fluently—in English'.)

This unconsciousness of the language used has to be deliberately cultivated in some lessons, while others of course have to point out the differences in idiomatic expression. Close co-operation on principles has to be ensured among the staff, so that all aspects should be taken into account though each session is devoted to compatible ones only and practice sessions intended for the acquisition of fluency are not impeded by the minutiae of grammatical pedantry. The interstaff discussions are amongst the most valuable contributions that training colleges for interpreters can make to the progress of the subject as a whole.

On the Continent such establishments are numerous; among the best known we shall mention only those visited by the author, who is indebted to them for their hospitality and for the opportunity to watch in practice forms of training which do not exist in Britain at all. There are interpreters' schools at Heidelberg and Mainz University, at the École des Hautes Études Commerciales in Paris, one in Munich run by Hitler's former interpreter, and, most prominent of all, the École d'Interprètes at the University of Geneva. This school, with its university setting, combines a bi-lingual background with a multilingual student population for whom French provides a really needed *lingua franca*. It has amongst its teachers linguists, academic philologists, translators, and practising interpreters and it offers opportunities of training for the beginner as well as for the expert in his own field who wants to improve his languages. In the courses for scientific translators the scientists and the linguists mutually profit from each others' co-operation. There are similar institutions in Montreal and in the U.S.A. but not in Britain.

At the international centres on the Continent the most varied crowd assembles to be trained. They profit from each other's company no less than from the official tutoring and university departments of modern languages in this country might well ask themselves whether their students would not profit from such association. The École d'Interprètes in the University of Geneva, for instance, attracts students from Asia and America who add their tongues to the living languages of student intercourse, even if French remains the main medium for most of them. The genuine need for such a language shows new aspects of it. For the practice of the minority idioms,

groups form for that minimum of conversation which will help the future secretary to get by in additional languages such as Portuguese. The university ambience and the joint courses ensure that background which makes the interpreter bi-cultural as well as bi-lingual. Next, a detailed study of some subjects at university level is demanded. Any school in this country wanting to attract the best of the foreign students would have to have similar standing at a university in order to be recognized for *équivalence*. They would be only too glad to find such a school here when they come for the indispensable term abroad that the interpreter needs before he can make a foreign language truly his own, and they cannot understand why during their term in England they cannot find any institution corresponding to the schools for interpreters at Geneva, Heidelberg, Paris, where they could continue to practise their skills as interpreters. These skills are inculcated in practice sessions which concentrate on various aspects. Once fluency in the foreign language has been acquired, texts are prepared that deal with such aspects of the foreign scene as might form the subject of a conference, the theatre or the oil refineries, or whatsoever the subject be; we found it was fairest to let the study of the documentation precede the oral work, as it would in actual practice. The more closely this training can be associated with professional requirements, the better, as we shall see later.

The simultaneous session should only deal with material that has been completely mastered, so that the automatic response can be taken for granted. Only then can the practice, usually in groups, help to overcome the hesitancy, pauses, speaking difficulties of the beginner. Everything must be set to help him to keep going; to sweep him back into the stream of simultaneous interpretation going on around him, it may be helpful to organize initial practices in large groups, in the auditorium of conference halls, where a number of students can perform together, at first without the consciousness of being listened to. The delivery of the text to them has to be such as to facilitate their task, which does not mean that it should be slow. Simultaneous interpretation differs, as we have seen, in its very nature from translation and only a teacher who is aware of this can help students to pass over the threshold between the two, from the very first session. That means that they should be 'fed' easy texts, well within their scope, cut up into thought units and, of course, clearly enunciated. From this they will graduate to work in booths at the schools and to dead booths at conferences, to which only their tutor

colleagues will listen in, and where their performance should be continuous, in alternation with a fellow-worker, as it would be at a real conference. The tutoring is confined to the method, the language work is left for different lessons where it can be developed to more advanced stages.

It is especially the work in consecutive interpretation which will develop the style. But here as well different courses should be devoted to different aspects. The note-taking courses concentrate again on the grouping of the thoughts—it is the contents not the form of the sentence that goes down on the student's pad in a non-language of signs and symbols. Assistance needs to be given with the selection of symbols that will be most efficient, such as special notation to designate opposites, and whether a noun or verb is intended in this 'do it yourself' syntax. But the most telling signs come from the student's own experience, the ones he spontaneously associates with certain thoughts and should make himself associate with them at all times. If a certain squiggle stands for 'moral rearmament' in the student's mind, he should see this symbol rise like a balloon between the speakers whenever he hears the term mentioned in discussion. What he needs to learn most thoroughly is the logical connection between thoughts expressed, for which his notation should be unmistakably clear. All too often beginners reproduce all the elements of a speech without their concatenation. Thus it is important to insist that the student should have a well worked out system of signs for *enchaînements* and to those generally recommended (e.g. in Mr. Rozan's *Prise de Notes*, mentioned in the bibliography) I would add enough to cover every group of dependent clause indicative of a dependence in thought, as well as indications of tense (through positioning on the page) and mood (to mark e.g. the unreal condition as distinct from the open one, and wishful thinking, in categories of their own). This general training (which is associated with *Vortragsanalyse* in Heidelberg, for instance) is the kind of training his mind needs for simultaneous interpretation too, so that from the point of view of the *formation professionelle* the two should be practised in any case, whatever the views about the compatibility of the consecutive and simultaneous technique may be in his working life.

From these considerations it appears that the expanding interpreting services of the future will be staffed by a motley crowd. There will be the born interpreter, the bi-lingual individual, who will be able to perform as soon as he puts on ear-phones, as the pioneers had

to when the new toy first appeared. He will profit from the subsidiary exercises as well as from the general setting of the university course, not only for his profession but also for his personality. The first post-1918 interpreters came to this new job as mature personalities—there is a danger that if youngsters take up this work too early, they will remain mere mouth-pieces, content with their parrot-like skill, and not develop the fuller interests and personality which will give style to their performance as well as a richer content to their lives. On the other hand, as they are introduced to the profession at a more pliant age, it is well possible that they may develop in quickness of response and ease of performance beyond anything we have heard so far. Good linguists will work with them to develop the same skills at a slower pace for satisfactory service at lower levels. They will be joined for some parts of their training, such as the technical perfection of their background knowledge, by future translators who will themselves learn to cope with interpretation within their limited field. The practising lawyers, doctors, scientists, any men at work in the various professions, will join them to develop their skills in adapting their language knowledge to interpretation requirements; they will often help as much as the instructor in charge to bring out the full problems involved in specialized translations and to find solutions for some of them.

This seems to be the moment to plead for a full investigation in this country of the possibilities of service in interpreting and of the training required for it. Only the universities, assisted by internationally recognized interpreters, could, as equal partners, undertake such research in co-operation with the best Écoles d'Interprètes on the Continent. Can any explanation be given for the non-existence of parallel institutions in this country? Is it due to the same attitude that allowed Lord Castlereagh to use the services of Gentz at the Vienna Congress to put the British case into French, although he was fully aware of Gentz's connection with Metternich? And that as late as the Chamberlain talks at Godesberg let the Foreign Office rely on Hitler's interpreter both for translating for Chamberlain and for providing them with a summary of what had been said? And that so astonished an official in charge of the *Sprachendienst des Auswärtigen Amts in Bonn* when, on a recent visit to this country, it took him several days to realize that the reason why he could not contact his 'opposite number' was the latter's non-existence?

Historically such a survey is called for because conference

diplomacy has spread much further than Lord Castlereagh could have foreseen. At the same time, since 1918 there is no longer one pre-eminent language of diplomacy, but a number which must be used. Together with the professional diplomat, French as the medium of communication has receded into the background. The democratization of international conferences has led to the increasing participation of representatives chosen for their standing or functions within their own community, people not necessarily versed in any language but their own. In addition standing committees and permanent international organizations bring together technical experts with linguistically completely different backgrounds. Non-political international conferences of experts (from doctors to shoe-manufacturers, high-sea lawyers to poultry-food merchants) become more and more frequent. The range of subjects treated at such conferences now demands the preparation of specialized and technical vocabularies. Both for prestige and practical reasons the number of languages claiming equal status increased from two (French and English) to five (for the United Nations), while others have claimed admittance for special agencies such as the International Labour Office; new combinations of languages reflect the groupings in the Coal and Steel Community and will be heard in future common purpose associations.

Then, as East and West will have to approach more closely, here is a chance for an institution in London to tackle the insufficiently explored problems of training Eastern and Western men for the interpretation of utterances into each other's idiom. For the interpreter to effect a successful metamorphosis of an English speech into a Chinese one or vice versa, he will not only have to be completely at home in both languages, but also in the *Weltanschauung* and culture of both groups, and to acquire a great deal of practical skill in quick conversion. For such training an institution in the metropolis of the commonwealth, with its schools and university departments, their personnel resources in staff and students, would be ideally situated.

At this moment the experience of the first generation of modern interpreters, some of whom are beginning to retire, is available to us for analysis and study, while the first generation of interpreters specially trained for the job is beginning to get known.

New techniques, including machine translation, should be tested in competition with each other by impartial observers.

A library of recorded performances should be made available to

students of technique. For the addict a recording of a famous interpreter is no less fascinating than that of a famous singer; it is urgent that great performances should be preserved for the record in a way which allows comparison with the original text (in spoken or written form), and experiments have to be made to answer our questions on the relation of the time lag to the personality of the speaker and that of the interpreter, to the source and the target language.

A branch of a university modern language department could constitute an Institute of Living Languages with a bias towards interpretation. It could give the academic students the company and stimulus of co-operation on problems alien to the university syllabus but not to the present scene. The vocabulary and glossary work would bring them together with practising 'manufacturers of equivalents', as Monsignor Knox called them, when they puzzle over terminology in the company of experts in the sciences or in industry, and together develop both vocabulary lists and translating skills. The systematic approach to such work is a training in itself: a study of texts for the compilation of a conference vocabulary brings in the problems of the arrangement of the vocabulary according to categories or alphabets, the mis-leading and the missing correspondence, the specific use of seemingly familiar words in a technical setting, the different use and ground covered by apparently equivalent legal phrases, the conditions that take on new shades against the background of a different ideology. An introduction to these difficulties and to the points at issue, as well as to the protagonists in the debates, provides not only a fascinating study but helps also to associate the students at an early stage with the practical work. Their attention should thus also be drawn to the necessity for transferring the new vocabulary into a well memorized list of additional *sigles* for use in consecutive interpretation for that particular conference. Students have been associated with preparatory research on vocabulary at various universities on the Continent and in America (cf. glossary mentioned in the bibliography). Such seminars might be called upon to save some of the busy interpreters' time in the preparation of a conference. When set the task of preparing a glossary before a particular, often brief, meeting of only a few days, they might help to avoid the waste of precious time as individual interpreters try separately to accumulate the necessary vocabulary for artificial animal re-production or traffic engineering. Once the necessary material has been gathered, the practising interpreters might be invited to be present. It is the function of the

chairmen of the seminar to see that as *little* knowledge is acquired as the occasion demands—not a complete course in biology, for example, but a survey of the animals the conference is likely to discuss because A.I. has been tried on them. These are preliminary exercises which should lead to the still all too rare briefing sessions when a member of the conference, acting as liaison officer, puts the interpreters wise.

In the diplomatic field more specialized briefing might have to be given on the terms to avoid as they hurt susceptibilities or bring in legal difficulties, but such preparation would have to be left to a department within the Foreign Office. The German *Auswärtige Amt* certainly has a *Sprachendienst* where advice is exchanged between linguists and politicians.

The Institute could also serve as a clearing house for much valuable material and experience that might otherwise easily be lost. If conference interpreters would deposit the valuable notes on conference parlance that have accumulated during the course of the proceedings, they would form a valuable basis for the preparation of the services for future conferences on similar subjects: it is the newly created language, the terms that have gained their special meaning in the discussion, that are so difficult to pick up before the next meeting and that help so much to convey the exact nuance. A central library of conference vocabularies is badly needed, so that the as yet unprinted terms of communication, that so often go into the waste-paper basket in the hurried packing up after a conference, could be saved and made accessible to any interpreters who might in future have occasion to use them. That such a centre in London might help to disseminate a good deal more of the expert interpreter's experience is obvious: before such a lively and interested audience as our students of living languages would be, it should be easy to persuade any of the international interpreters whose work brings them to London, to dissect their work critically, discuss its problems and etiquette and perhaps record examples of it for future analysis and discussion. A library of tape-recordings of the great interpreters would be an invaluable source of material for the elucidation of the mysteries of their performance and a most interesting historical record. To it should be joined collections of the notes from which consecutive interpretation has been given, preferably with the original text: such reconstruction *ex ungue* would also reveal their thought processes, individualities, and general hints on technique.

By making it a centre for English courses for foreigners, further representatives of rarely heard idioms could be attracted. Converse with them as well as the job of interpreting for them, when they speak their own language or perhaps their own version of one of the great conference languages (as happens all too often) will add for the other students extra opportunities for study and practice.

At short notice short-term courses could be run for the operatives of a particular industry or administrative organization, to bring their linguistic skills to conference service level in their particular *rayon*. At the same time these courses would give the permanent students an insight into technical problems of a particular branch of translation.

The Institute could try objective experiments in the comparison of various techniques to find the most suitable ones for special purposes and its students, who had experimented in them all, could subsequently advise conference organizers on their joint and varied application.

A pilot experiment in the establishing of such an Institute of Living Languages might be conducted first as a kind of *succursale* to the continental schools. A university department might offer a home to courses which allow foreign students to continue their interpreters' training during their stay in this country; in close co-operation with their continental tutors, short-term courses could be arranged for this purpose in which British students would of course be allowed to take part. As the experiments expanded, the prestige of the training could at once be ensured if, in addition to fulfilling all the pre-conditions discussed and demanded by the corresponding continental institutions, the final diploma examination were at once entrusted not to the instructors but to an outside body, such as Unesco, which could set up a jury of interpreters with international standing who would test candidates under conference conditions after the school had declared them fit to present themselves for such a test. It would be the school's business to guarantee that such candidates had the wide general culture desirable and to lay down minimum requirements such as a general honours degree, specialist knowledge in some subjects, advanced practical experience in others, translation work done successfully, or equivalent qualifications which would ensure the sufficiency of the candidate's general background. Admission to the interpreters' tests should then only be granted when linguistic proficiency had been assured by a number of examinations, including

written translations, technical work, knowledge of dictionaries, periodicals and other sources for specialized vocabularies (every candidate ought to prove his familiarity with an extensive *Hilfsmittelkunde*) and tape-recorded performances that have been checked for accuracy.

During the final examination it would still be necessary for observers to be present, in addition to the top-level interpreters who pronounce the final verdict. These observers, who could, but need not be, conference interpreters, would have to be thoroughly familiar with the texts set and with possible versions for the translation. They would only listen in to the consecutive and simultaneous performance in order to declare it void if the translation was not good enough. This would leave the interpreter jury free to judge the type of performance, fluency, style, ease of delivery by the criteria of actual conference performance. Candidates passed out by them would then at once gain admittance to the profession.

With a profession and a type of work that has developed so rapidly within the last 40 years (e.g. the number of major international congresses has risen from 3,000 between 1920 and 1930 to 10,000 between 1940 and 1950, according to de Clavé) there is no reason to regard the present state as sempiternal. Not only interpretation in transatlantic radio link-ups but many as yet unsuspected forms of service are likely to offer new venues for intending interpreters. If English is to keep its place on these channels, would it not be advisable to introduce into them more speakers to whom an English pronunciation of English comes naturally? To decide which of our young people should take up such work, tests could be developed on the lines of the experiments suggested to find out which of them have the qualities of split-mindedness, concentration, superficiality (and some apparently mutually exclusive ones), which, together with the right personality traits in addition to the linguistic ability, will make them successful at it. A university department working on its students in co-operation with psychologists would have a great deal to tell us not only about early ability tests but also about thought processes in general. It might well be that the non-thinking interpreter, pouring out perfectly phrased thoughts, might teach us something about the (non-linguistic?) nature of thought.

No paedagogic argument has been put forward to explain why there is no institution in England corresponding to the Écoles d'Interprètes in Paris, Heidelberg, Geneva and elsewhere. However different

England may be from all continental countries, it has gradually become obvious that it has to join the European community in more and more of its activities. There is no reason to suppose that the young English-speaking generation is less gifted than their continental contemporaries, some of whom have picked up languages (e.g. Russian) from scratch and reached interpreter standard in three years. Their practical present-day bias will make them complementary comrades for their more academic colleagues.

Why should our students not have the advantage the Swiss, Germans and French enjoy, of being able to start in their own country the training which will lead to such an interesting and worth-while contribution to mutual human understanding?

BIBLIOGRAPHY

1. A more detailed introduction to the problems raised will be found in a thesis by the author of the article, entitled 'An Investigation into Conference Interpreting', which London University accepted for the M.A. degree in Education in July 1957.

2. Interpretation is incorporated in the treatment of translation in two recent publications:

Beiträge zur Geschichte des Dolmetschens, Thieme, K., Herman, A., and Glaser, E.; Universität Mainz, Isar-Verlag, München, 1956.

and *La Traduction dans le monde moderne*, Cary, E.; Université de Genève, Georg et Cie., Genève, 1956.

3. The Interpreters' School in Geneva has started a series of publications of interest to interpreters:

Dolmetsch und Übersetzer, Dr. jur. Otto Weissel, 1945.

Manuel de l'Interprète, Jean Herbert, 1952.

La Prise de Notes en Interprétation Consécutive, Jean-François Rozan, 1956.

all published by the University at Georg et Cie., Genève.

See also the series *Glossaria Interpretum*, sponsored by the Universities of Geneva, Mainz and Georgetown (U.S.A.), of which *Conference Terminology*, ed. S. Stelling-Michaud and J. Herbert (Elsevier Publishing Co., London, 1957) has just been published.

4. (a) Up-to-date references to special problems of interpretation will be found in the following linguistic reviews:

Babel, Revue Internationale de la Traduction, published by La Fédération Internationale des Traducteurs, Librairie de L'Unesco.

L'Interprète, published by l'Association des Anciens Élèves de l'École d'Interprètes, Université de Genève.

Lebende Sprachen, ed. by Dr. A. Lane and Dr. G. Haensch; Langenscheidt KG., Berlin.

(b) Machine Translation is discussed in:

Machine Translation of Languages, ed. by Locke, W. N. and Booth, A. D.; Massachusetts Institute of Technology and John Wiley & Sons, Inc.

The Human Use of Human Beings, and *Cybernetics and Society*, Wiener, N., London, 1950.

Mechanical Translation (a periodical), ed. Locke, W. N. and Yngve, V. H.; Massachusetts Institute of Technology.

5. The experience of Dr. P. Schmidt, Hitler's interpreter, is embodied in four books:

Statist auf diplomatischer Bühne; Statist auf der Galerie; and *Sprachen Lernen—warum und wie?*,

all published by the Athenaeum Verlag, Bonn;

and *Technik und Praxis internationaler Konferenzen* (jointly with Dr. G. H. Haensch),

published by Isar Verlag, München, 1957.

6. A series of lectures on Aspects of Translation was held under the auspices of the University of London Communications Research Centre, and these were published earlier this year.

On Human Communications, a review, survey and criticism has just been published by Colin Cherry (London, 1957); it deals with the mathematical, psychological and linguistic aspects of communication by language that will have to be taken into account in any deeper study of communication from one language to the other.

7. After the writing of this article a number of *Babel* (Vol. IV, no. 1) has come to hand that is entirely devoted to the problems of 'La Traduction en Asie'.

8. A 'Bibliographie de l'Interprétation', concerned mainly with articles in periodicals, has been published in the *Journal des Traducteurs* (Montreal and Ottawa, Jan.-March 1958, Vol. III, no. 1).

POSTGRADUATE TEACHER EDUCATION SOME EXPERIMENTS IN THE U.S.

JOHN J. FIGUEROA

Lecturer in Education, University College of the West Indies

RECENT visitors to the U.S., particularly if they are from the U.K., often feel compelled to write about their experiences in America. Very often they betray a naïve 'it is not that they stand on their hind legs well, but that they stand on them at all' kind of attitude. Recently, through the good offices of the Ford Foundation, the Government of Jamaica and the U.C.W.I., I was enabled to make a four-week survey of some of the work being done in the post-graduate training of teachers. I feel compelled to write about the experiments which I saw, not because they are taking place in America but because they are so interesting and represents a sound dissatisfaction with the present state of teacher education together with an imaginative, experimental attempt to provide something better. It certainly was refreshing to discover that energy, money and imagination were being so wisely spent in the U.S. on the academically neglected, and slightly unrespectable, field of teacher education.

Three of these courses were visited by me: the one at Harvard, which I shall discuss at length later on; one at Johns Hopkins, and one at Cornell, Ithaca, New York, which is post-graduate, but unlike the other two is not based on 'internship'. The three experiments have a great deal in common; their chief new feature is an adaptation of the idea of 'internship'—borrowed of course from the education of medical doctors. Another important feature is the fact that for half of their post-graduate university course the 'interns' are in the full employ of the local education authority; they are employed as responsible members of staff, under supervision it is true, but being complete though part-time members of staff.

What happens at Harvard is this. John and Mary, being undergraduates in two of the 29 co-operating liberal arts colleges, decide in March or April of their senior year in college that they would like to do the Harvard post-graduate education course. They each apply to

their own college—let us say to Holy Cross and to Wellesley. In each college there will be a selection committee which is fully aware of the requirements of Harvard and of the Newton Education Authority. John and Mary are recommended by their colleges and then proceed to Newton to be interviewed. If the Newton Education Authority is satisfied with these candidates it offers each of them a post for one year; however, the contracts are so arranged that John and Mary together make up, from the point of view of remuneration and teaching load, one full time member of staff.

John and Mary then return to their colleges, and like seniors anywhere else hope that they don't do anything too foolish in their final exams. However, it is unusual in the States for anyone to get quite that far and then fail. And the odds against its happening in the case of selected people like John and Mary are very long indeed.

In June or early July, some weeks after graduation, John and Mary join the other interns at an appointed school in Newton. This school will have been selected because it is having a regular summer semester; it is not a 'practice school'. It is one of the public schools which has announced a summer session and which is staffed by teachers who have chosen to teach during that session, and by the Harvard-Newton supervisors. It differs from the regular public school only in that, as attendance is voluntary (except for parental pressure), the children are likely to be more anxious to learn.

For six or eight weeks during this summer session the interns work with some of the people who are to be their supervisors and lecturers for the whole post-graduate course. The supervisors teach in the summer school; the lecturers from Harvard lecture where and when necessary. The interns at first observe in groups—not only classes but school organization and out of class activities. They have regular discussions and seminars. By the end of the time they have been taking full responsibility for classes regularly. (This is true in the Harvard-Newton scheme. Elsewhere the interns do very little teaching during this period.)

Two weeks before the public schools open—the students having had a few weeks break—they gather at Harvard for a briefing session. When these two weeks are over half of the students go to their posts in the schools; the other half remain at Harvard. Mary will go to assume full responsibility for a grade eleven class, let us say, at Meeks; John stays at Harvard and begins the so-called academic part of his course. He will have lectures in philosophy of education, in

sociology, in what were rather charmingly called 'How to do it' courses; he will have a course in psychology which he shares, late in the afternoon, with those interns who are actually teaching and who return to the college for this lecture once a week. The student who is in the college (while his colleagues are teaching in the schools) will also be expected to do some research in his chosen field; if John has majored in history he will be expected to do a short thesis on some historical problem or topic. In order to prepare himself for this, the resources of Harvard are at his service.

There is a great deal of flexibility allowed in the matter of required courses for the academic side of the training. If John can satisfy the graduate school that, as is likely, his grounding in philosophy at Holy Cross was sound, then he may well be exempt from part or all of the philosophy course; he might be weak in history. His partner Mary, when she comes to do her work in the college, might well be exempt from sociology.

At the half way point John and Mary are switched. John goes out to take over the full responsibility for the class Mary has been teaching, and Mary pursues at the college much the same sort of course as John has been pursuing while she was teaching.

By the end of the university year all who are going to make the grade will have obtained posts. Some 50 per cent of the students are kept on by Newton, but, of course, many wish to teach elsewhere. The group of post-graduate students all come together at the end of their year to prepare for their first job. Each person will know what school he is going to, and what grades and subjects he will be teaching. The group spends about a month together, each one preparing carefully, and with whatever help he might need close at hand, for that very important first step in the teacher's career: the first, full-time job away from the apron strings of Alma Mater.

The main variation to be noted on the scheme outlined above is to be found at Cornell where, besides being not based on 'internship', there are no lecture courses. The intellectual needs of the students are entirely looked after by seminars in which 'resource persons' are called upon to offer direction and help as the need arises. These are not haphazard seminars: there is one person whose main function is to organize them. He studies the needs of the students and is then free to enlist the support of any member of the staff of a university whose population is 10,300 and whose standards are clearly high. The post-graduate education students are reported to read widely,

and are required to write a thesis. The students are also required to keep very full diaries all the while they are in the schools.

Certain criticisms and questions will immediately arise in the mind of any one who is concerned with the post-graduate training of teachers. Let us, for a start however, note to what extent Harvard-Newton has increased the length of the course and has diversified its attack upon the problems of teacher training. Not only is there the so-called 'internship', but there are those six or eight weeks early in the summer with a few weeks' break after—time in which no doubt some maturity of the new ideas starts to take place; note also the addition of the final month of preparation for the first full time job. The problem of supervision remains a difficult one, but the early six-week period is useful, among other things, in insulating the students against the corrosive influence of those members of staff who are in teaching, and hate it, because they cannot find other employment. The summer school is clearly always staffed by enthusiasts and by supervisors who know their jobs.

The Harvard scheme, which I studied more closely than the others, is an admirable attempt at rethinking, yet its two most fruitful features seem to me to be partly the result of chance, and to illustrate the importance of doing more than merely tinkering with the present post-graduate arrangements in the U.K. In the first place it has lengthened the time for the post-graduate preparation of teachers; in the second it has attracted to teaching a liberal arts graduate of a socio-economic group which previously has not be very active in the teaching profession in the U.S.

A word about these two features: first of all, time. A glance at what is usually demanded of a teacher in his post-graduate year of training should be enough to make the point that no use of mass media, no acquisition of the greatest efficiency, will enable the intending teacher to develop his talents to a suitable level under the present conditions of crowding everything into one academic year. Harvard is to be congratulated on having started to stretch that academic year in the right direction: it is now very nearly a full calendar year.

What fields is the intending teacher expected to traverse in his one post-graduate year? In almost all institutions will he be expected to 'study' philosophy and/or philosophy of education, psychology, history of education or the administration of schools; he will have to reconsider hygiene under Health Education; he will have to spend about one-third of his year teaching, observing, 'practising'; he will

also follow a course in 'methods'. This course varies considerably from place to place, but the best of such courses demand that the student reconsider his special field, e.g. history, with a view to determining what part it can and ought to play in the education of youth. This kind of reconsideration leads to questions, answers, about the nature of history, about what kind of pursuit it is, and what kind of values it assumes and encourages; it leads also to a consideration of the structure of the subject—what parts have to be done first—and to the structure of children's development—when can they best learn what they ought to learn?

Often the psychology and philosophy courses are the very first occasions on which the intending teacher has met philosophical entities and psychological methods and results. Not only does he find them difficult; but in meeting them he loses his confidence, for he who considered himself proficient in his special field last June finds himself a confused beginner this September. All this the intending teacher is faced with, plus, of course, the strain of teaching for the first time. Moreover, in my experience it is in the post-graduate year that the student first really questions the nature, validity, and raison d'être of his subject.

For these reasons the Harvard experiment (as well as that of Johns Hopkins) is absolutely right in adding six or eight weeks to the usual one academic year. The Harvard experiment is in many ways doing the very best that can be done in the given length of time, but it would be dishonest not to point out that the kind of high class teacher which the experiment hopes to develop can no more be produced in one post-graduate year than a good doctor could be produced by eighteen months of study after his pre-medical degree.

So much for the length of course. What, now of the kind of student who is attracted to the Harvard course? It was pointed out at Newton that because of careful selection and because the 29 College Programme draws on well established liberal arts colleges, students of a highly cultured background, and from upper middle class homes, are now being more than ever encouraged to enter a profession which so far has had little prestige—social or financial. It is in no sense snobbery to realize the importance of encouraging into the profession just that kind of teacher. The children will gain much by coming in contact with such teachers; the profession will gain in prestige. However, it is as well to realize that teaching will never have the honour, prestige or efficiency it needs and deserves, until it is realized that the

professional and educational preparation of a teacher cannot be achieved in five years of post-high-school study. The name internship, as used at Harvard and Johns Hopkins, is very suggestive. It makes an implicit comparison between medical and teacher education; it implies responsibility on the part of the intern, and also a healthy 'learn-on-the-job' attitude; but it also forces very strongly on the mind the question, why is it that our society is willing to spend so much more time and money on the education of its medical men than it is on the training of our teachers?

It does seem to me a matter of urgency that at least some few intending teachers be given, as an experiment, a two-year post-graduate course in teaching and education, a course in which the spiritual and mental maturity of the students could be fostered, their scholarship firmly founded, their human relationships with children and other learners nurtured into a bond of care and openness, their professional duties and responsibilities understood and embraced: in short their being as teachers, masters, 'gurus', 'rabbis', investigated, understood and firmly established.

Such a course would have to concentrate on a problem which is acute in any teacher training scheme, and which, although well handled at Harvard, is none-the-less a most troublesome challenge: the supervision, help and encouragement of the interns while they are teaching. The profession is in such a state that a tutor cannot ever be certain that any given school will have, in enough subjects, teachers who are willing and capable of acting as real supervisors. So that often the intern does not get enough out of his time in a school—merely teaching does not necessarily improve one's teaching. The problems of supervision are somewhat lessened by the willingness of Harvard and Newton to call meetings of the supervising teachers and the Harvard and Newton staffs. These meetings no doubt offer good opportunities for communication; but supervision is still, one would imagine, the main problem of the Harvard-Newton scheme.

The internship programme helps the schools by providing one full-time teacher, all during the post-graduate year, for every two students; it helps the student by providing him with a fairly large sum of money which he may use for paying his fees. But most of all it removes the student in training from the status of 'outsider': he is a hired member of staff, he is a full member of the common room, he is responsible, while he is in school, for the work of a full class. Of course he is under supervision, of course the university sees to it that the more

deadening clichés of the trade are fully examined; but he receives the help of the university from a position of security, from a position of being a member of the school community.

Clearly problems of divided authority could arise; but one of the side effects of these new experiments is to bring the university departments of education and the schools much closer together; those variously concerned with the interns have not, as far as one could make out in so short a time, squabbled over whose word should be taken but have come together to try to discover what word and what actions are most helpful. The public school systems have been very happy to co-operate with the universities in a scheme which is bound to provide the schools with better teachers and the profession with a new kind of teacher, a teacher who has benefited from what places like Harvard and Johns Hopkins can offer, a teacher who has discussed his problems not only with one headmaster but also with supervisors and research students and professors who are not burdened with the administration of a school, and whose experience of various kinds of schools and educational problems is likely to be wider than that of the usual headmaster or assistant master.

The opportunity of studying the experiments at Harvard, Cornell and Johns Hopkins brought back to my mind many problems which, perhaps, have not been faced seriously enough by the teaching profession and by those in the universities who are concerned with the education of teachers. I put some of these questions forward in a rather summary fashion in the hope that they might cause some few at least to rethink the whole matter of university teacher education.

(1) If no consideration of the problems of teaching, and if no experience of the classroom, is to be introduced until the first degree has been finished, then is *one* post-graduate year enough?

(2) If four years (3 + 1) are considered enough for the basic university training of a teacher, would it not be better to design the whole four years as a unit, rather than following the usual English system which is very much like slapping a Grecian façade onto a Victorian box of bricks?

(3) If financial considerations and inertia make it necessary to keep the present pattern of degree first then post-graduate certificate after, should we not accept this merely as a basic beginning, and institute courses either of 3 years plus 2 post-graduate, or of five years planned as a unit? These 5-year courses would provide at least a few high

quality teachers who would occupy a position in the profession something like that held by doctors who have done a fellowship.

(4) Ought any distinction to be made between an M.A. in Education and an M.A. in Teaching? Is the Doctor of Philosophy who has never taught to be considered less or more qualified to teach than the holder of a post-graduate certificate in education?

(5) Should the profession of teaching not play a large part, in co-operation with the universities and the administrators of schools, in the selection of recruits to the profession and in the setting up of the qualifications whereby persons may enter the profession? Should it help in organizing some means, whether five-year university courses or not, of providing the profession with a good core of people who have not only done further research but who have had much better professional training than nine months in a post-graduate education course can be expected to ensure?

(6) What part can *full*-time 'in service' schemes of training play in improving the status and efficiency of the teaching profession?

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LONGMANS

REVIEWS

A Century of Darwin. Edited by S. A. BARNETT. *Heinemann*, 30*s.*

The years 1858-59 formed a nodal point in the web of British life and thought. They saw the death of Macaulay and Robert Owen, the birth of Beatrice and Sidney Webb and of Havelock Ellis, the foundation of *Macmillan's* and the *Cornhill*, and the publication of a rare cluster of influential books. J. S. Mill's *On Liberty* and Samuel Smiles's *Self-Help* illuminated two important strands of social thought, George Eliot's *Adam Bede* and Meredith's *Richard Feverel* gave literary form to new doubts and new determinations, and Mansel's *Limits of Religious Thought* pursued theology in a manner which reminded T. H. Huxley of Hogarth's enthusiast busily sawing off the sign on which he was sitting. And, following the paper presented jointly with Alfred Russell Wallace to the Linnean Society, Charles Darwin's *Origin of Species* quietly planted a time-bomb under the obconical edifice of orthodoxy. Now, a century later, this admirable *Festschrift* sets out to assess the significance of Darwin's work.

The volume suffers, as most symposia do, from a variety of literary styles and a certain repetitiousness, and it is unfortunate that few of the contributors manage to present essentially simple ideas simply, but the reader ignorant of biology should be able to work his way through it. Certainly any non-scientist who seriously wishes to appreciate the implications of the most fertile scientific idea since Newton will endeavour to do so, and he will be rewarded by little gems of clarity like Michie's essay 'The Third Stage in Genetics', and Barnett's 'The Expression of the Emotions'. He will no doubt also derive amusement from the contributors' evident difficulties in avoiding the very anthropomorphism for which they chide Darwin, and perhaps also from the scholastic affinities of the biologist who determinedly divides the American grizzly bear into seventy-nine distinct species ('There's a great text in Galatians . . . '). And, despite all gaps in initial knowledge, he will gain a new dimension of understanding.

Darwin, unlike Huxley who was the prototype of the professional biologist, was the last of the great gentlemen naturalists, and logical rigour was never his strong point. His brilliant friend did not fail to

point out the weaknesses in his theory and the gaps in his proof, but it is remarkable how far Darwin was carried by his insatiable curiosity, tireless industry and inductive imagination. Of course, in adopting Herbert Spencer's expression 'the survival of the fittest' without adequately defining fitness, he tied himself to a near-tautology, but Darwin was a good deal subtler than most of his detractors have appreciated. This comes out especially in Michie's account of his 'pangenesis' theory of heredity, which looks like becoming less of a joke than it has been for the last few generations. As the fog of political recrimination which surrounded the great Lysenko controversy a decade ago begins to settle, it seems that the heritability of acquired character is still an open question. And it will not be settled by naïve experiments such as the amputation of mouse-tails over twenty generations (especially since essentially the same experiment has already been performed over a much longer period in the ritual circumcision of Jews). But Hinshelwood has trained bacteria to tolerate poisons and to transmit this newly organized 'biochemical wisdom' to their progeny; Lansing has found that the 'children of elderly rotifers' (admirably Lear-like phrase!) are short-lived; Medawar has shown by tissue-grafting experiments that the nuclei of cells may be irreversibly modified during embryological development; and Danielli has demonstrated that when nuclei are transplanted between related amoebae there are consequential changes in both nucleus and cytoplasm. Perhaps the chromosomal sanctum is not so inviolate after all and there is something in the hybridization methods of Michurin upon which recent soviet genetics is based? And was Huxley perhaps wise in refusing to advise Darwin to suppress his bizarre 'pangenesis' idea, lest some future rummager among his papers should say 'See this wonderful anticipation of our modern theories, and that stupid ass Huxley prevented his publishing them'?

But despite Darwin's admirably wide-ranging work, on the expression of the emotions, on coral reefs and earthworms and plant physiology, it is with the theory of evolution that his name is especially linked. His great contribution to biology was the demonstration that species are not static, but dynamic, entities, thereby both providing an ideological basis for a natural taxonomy of living things and at the same time explaining why no particular classification can ever be final. As Dobzhansky points out, the species problem still remains the subject of lively controversy, but several of these essays marshall convincing evidence that species, unlike certain other taxonomic

categories, have an objective existence independent of the opinions of those studying them. With reservations in the case of fossil and asexual types which cannot in the nature of things be submitted to cross-fertility testing, species seem to be genetically closed systems which have evolved breeding barriers against related populations in such a way as to avoid the production of hybrids ill-adapted to the environment. The pool of genes present in species-dog produces individuals suited in varying degrees to dog-way-of-life, the pool present in species-coyote produces individuals suited to coyote-way-of-life, and the existence of a breeding barrier prevents the wasteful birth of individuals not well suited to either. Thus the very process of species-formation is itself a special form of adaptation, by which a population which has once become adjusted to a particular environment is preserved from the gradual erosion of its genetic strength by two-way gene-diffusion across its borders. And, viewed in this way, as more than one contributor comments, the otherwise baffling profusion of colours and shapes and smells and patterns in certain groups of organisms becomes explicable as a vast system of recognition signals inducing either sexual congress or sexual withdrawal. In fact, it seems, there is an essential truth in the old joke that the best way to identify a male fly is to ask a female fly.

Nor is all this merely the private concern of professional biologists, for the modern development of Darwinism has important implications for the urgent problem of race relations. There are real differences between human ethnic groups, and it is mere sentimentality to pretend otherwise, and there seems no reason in principle why our species might not have evolved distinct (and perhaps incompatible) races. But, as a matter of fact, human populations form genetically interpenetrating groups, which have for many thousands of years so interbred as to diffuse genes in all directions, so that quite literally each one of us must say with Donne, 'I am involved in Mankind'. Moreover, the absence of any breeding barrier within the species is itself strong evidence that interbreeding is not harmful, for otherwise the natural selection of compatible and highly adaptive gene-pools would have been accompanied by the development of blank areas reflecting varying degrees of infertility. It is a perfect example of what is popularly called 'poetic justice' that the very branch of biological study which, in its infancy, was seized on as pseudo-scientific sanction for racial discrimination, should in its maturity most effectively torpedo the whole racialist argument.

There is much more that could be said, most of it congratulatory, about this volume. It leaves as its dominant impression an immense respect for the generalizations made a century ago by an amateur of genius, now emerging clearly and firmly above the shifting sands of criticism which have been blown about him by comparative lightweights. As one lays the book down, and reflects upon the vicissitudes through which Darwin's theory has passed, one recalls a jotting in one of the note books of 'Darwin's bulldog'.

'The Four Stages of Public Opinion

I (Just after publication)

The Novelty is absurd and subversive of Religion and Morality. The propounder both fool and knave.

II (Twenty years later)

The Novelty is absolute Truth and will yield a full and satisfactory explanation of things in general—The propounder man of sublime genius and perfect virtue.

III (Forty years later)

The Novelty won't explain things in general after all and therefore is a wretched failure. The propounder a very ordinary person advertised by cliques.

IV (A century later)

The Novelty a mixture of truth and error. Explains as much as could reasonably be expected. The propounder worthy of all honour in spite of his share of human frailties, as one who has added to the permanent possessions of science.'

CYRIL BIBBY

Man and Culture. An Evaluation of the Work of Malinowski. Edited by RAYMOND FIRTH. Contributions by J. R. Firth, Raymond Firth (two), M. Fortes, H. I. Hogbin, P. Kaberry, E. R. Leach, L. Mair, S. F. Nadel, T. Parsons, R. Piddington, A. I. Richards, I. Schapera. *Routledge and Kegan Paul.* 32*s.*

Social Anthropologists are defined not by the fact that they study tribes but that they are a tribe, just as sociologists are distinguishable by the anomie they display as much as by the one they investigate. The structure of the anthropological tribe is like that of many academic groups, in the main (disregarding complications arising from the influence of the late Professor Radcliffe-Brown) unilineal and segmentary. At the apex of each clan stands the common

ancestor, descent from whom delimits membership. In the volume under review, members of the brilliant clan claiming descent from Malinowski, in the main the currently cathedral generation, give accounts and assessments of their ancestor and in so doing naturally and inevitably also give an account of the clan itself and its development. Even if not all segments are represented, there could seldom have been so impressive a list of informants so neatly lined up (each mapping one of the many aspects of Malinowski's work) nor could one wish for a clan more worthy of investigation. It deserves investigation because, over and above the merits of its ideas, it is closer than many academic traditions to achieving enough cohesion for communication and cumulativeness and yet not so much as to thwart progress—unlike some of the either undirected, or on the other hand *gleichgeschaltet* populations around it on the departmental map.

A curious thing is that the Malinowski clan as self-portrayed in this volume is the only documented case I know of the occurrence of the Freudian version of the social contract. A number of the contributors more or less frankly confess their ambivalence and comment on its roots in the fact that in criticizing, they are striking at their intellectual father, and note that in such circumstances a blow must be hard and determined if it is to be made at all. So, a common ambivalence, a shared paternity and a shared guilt appear to be the social bond . . .

In a sense, of course, the very existence of this book is a paradox. One of the key ideas of the Malinowskian approach was the irrelevance of the past as such: '. . . the past is significant *in-so-far* as it lives in the present' (quoted on page 243, italics mine). This being so, and Malinowski being dead—does only the remembered and not the real Malinowski matter?—and what if the two diverge? Much of him is in fact very much alive, whether remembered correctly or not. The paradox is accentuated by those who (rightly) stress that the *rejection* of the past must itself be seen *in its historical context* (as a means of combating facile and superficial explanations of present institutions as 'survivals'). So the historical context seems necessary for at least one explanation. At least two of the informants explicitly see Malinowski's ideas themselves as he would have us see those of tribesmen. Professor M. Fortes says (p. 164): 'Functional theory as developed by him is an impressive attempt to provide what he would have called a "charter" . . . for the kind of field research . . . of which he was the unrivalled master.' Mr. Leach says something similar on p. 124:

'Functionalism in Malinowski's hands became something very like a religious creed.'

Alive though he is in present practices, it is not always the same Malinowski who is remembered. Informants sometimes contradict each other—as informants will—and one of them is engaged in forging some dubious but very suggestive genealogical links to justify a present alignment. Professor Parsons tells us (p. 67) that 'Essentially Malinowski's social psychology turns out to be a modification of the instinct theory of McDougall'. He had (p. 70) '. . . without full understanding, decided that Freud's theory was culture-bound and could not explain Trobriand facts [and] dropped it and never made serious use of it . . .' Per contra, Professor Fortes tells us (p. 168) 'Thus, psycho-analysis fitted Malinowski's general approach. It also fitted his conception of human nature.' 'Malinowski's debt to psycho-analysis is obvious in much of his work . . . but nowhere so markedly as in his description of Trobriand family structure . . .'

Or: Professor Raymond Firth tells us (p. 14) 'Malinowski had not seemed to be particularly conscious of himself as a Pole in any politically nationalist sense.' On page 13, he quotes a letter of Malinowski's written in 1914 in which he says 'We had the best treatment in Austria and as a confederation of fairly autonomous peoples, A. was one of the most passible [*sic*] states . . . This is my *confession de foi*.' On the other hand, Miss Lucy Mair (p. 232) says 'Malinowski's own experience, as a Pole under Austrian rule, of the situation of ethnic minorities in Europe, as never far from his mind . . . In Europe this consisted essentially in the suppression of overt modes of behaviour . . . ' And, on page 235, 'Again in part because of his own experience as one of a subject people in a European empire, he was deeply sympathetic to African discontents . . .'

The informant who seems to be forging a link is Mr. Leach. Rightly discerning an important analogy between Malinowski's approach in anthropology and William James' in philosophy, he goes on from this to claim that Malinowski was 'grounded' in James just as the authors of the book themselves were grounded in Malinowski. Leach's motive in forging this link appears to be a desire to align anthropology with what he considers to be a successful current movement in philosophy and to argue that current anthropology is superior to Malinowski's as linguistic philosophy is superior, in Leach's estimate, to Pragmatism.

Now the forging of the link is itself harmless enough: what is more

serious that having done so, Leach accepts the legends of the movement (linguistic philosophy) to which he is connecting himself: 'Down to the end of the nineteenth century most philosophies . . . were based on Aristotelian logic, which assumes that all Truth is of one kind and that the validity of statements about God can be tested by the same criteria that might apply to statements under the sun' (p. 122). Conjectural history about a documented subject like philosophy is not merely un-anthropological, it is also rash. Mr. Leach must learn to distrust informants in Cambridge as he would in Burma or Ceylon. What *is* true is that only of late has the idea of the diversification of logic been pushed to the point (beyond Pragmatism) where there can no longer be any general criteria and hence no criteria at all, so that any conceptual change becomes unintelligible. This is indeed analogous to an extreme form of Functionalism which also treats certain phenomena (such as ritual statements) as sui generis and context-bound and thus makes both comparison and social change unintelligible (for similar reasons).

The one contributor who claims to have gone radically beyond Malinowski is Professor Parsons, who finds him defective on the subject of the relationship between the individual and the social system. Parsons provides us with the following premisses: Malinowski was not definitely first-rate as a theoretician of social systems. Those very defects in his treatment which prevented him from being definitely first-rate were however avoided by 'Parsons, Bales *et al.* (1955)'. Modesty has apparently prevented Parsons from completing the syllogism.

A contributor who attempts to defend Malinowski precisely at the point at which Parsons thinks Malinowski failed to advance far enough is Professor Piddington. Piddington attempts to defend, as few would wish to do nowadays, the use of explanations in terms of 'Basic Needs'. The difficulties inherent in the notion he thinks can be overcome by making use of the *Cultural* Standard of Living (as opposed to a merely material one) and by realizing that basic needs are generic, only acquiring their specificity in a social contest. But these devices, reminiscent of the neo-Marxist attempt to prove that workers are still at the starvation edge because this edge is relative, seem to me to make the whole argument circular: if social factors decide the standard which must be attained, that standard is no longer basic, no longer the independent variable, and if the needs are merely generic, to indicate them is to classify rather than to explain.

What is true is that a society must survive to exist, and to do so its members must eat, procreate and avoid death by exposure and illness. It does not follow that the nature of the society or of its members' aims can be explained by starting from this consideration.

Professor Piddington also attempts to save Malinowski from the critics of his a-historism by invoking the time-span involved, wishing to allow 'cultural lag' for shortish time-spans. But this won't do either. In one sense, there are indeed *no* historical survivals: what is done, is done now and *ipso facto* has a motive now. In another sense, there are cultural survivals: causal chains, including repetitive circular ones, can and do continue to operate over *long* as well as short periods. Thus Piddington's compromise is both too weak and too strong. It is better to say that the a-historism was a confused doctrine but an excellent charter for good investigations which do not take continuity for granted—and leave it at that.

Whilst disagreeing with Piddington's attempts to save basic needs, Parsons' claim to have advanced the subject by more elaborate and differentiated conceptual schemes seems to me mistaken. The key notions of those schemes are not themselves original or difficult, and their baroque elaboration has not, so far, either illuminated the past nor inspired, or even 'chartered', new and fruitful researches.

One theme which appears a number of times in the volume is that of the ethical and practical implications of Malinowskian anthropology. For it makes a powerful impact in a number of ways—through its relativism, its functional and hence implicitly conservative interpretation of institutions, and its functional and hence implicitly tongue-in-cheek interpretation of social doctrines, ideologies, myths. In connection with the conservatism, Mr. Ian Hogbin remarks (p. 248) '. . . in 1922 Malinowski published a paper . . . which the general public must have found revolutionary. He put forward a theory of culture as an integrated whole and stressed that if any part was tampered with a general collapse might follow.' A conjectural reconstruction of the general public's reaction? I should be surprised if the general public found quite such novelty in an idea that has long been a commonplace of conservative political theory. What *is* novel about Malinowskian anthropology is not the idea, but its detailed and thorough application. Conservative political theorists have on the whole contented themselves (and still do) with just *asserting* it, possibly embellishing it with an illustration or two. (Sometimes they add the doctrine of the impossibility of social *understanding* as well

as of social tinkering, thereby obviating even the possibility of pursuing the idea further.) The important thing about Malinowski is not the assertion *that* it is so, but the fact that the assertion was a charter for detailed investigation of *how* it manages to be so. The assertion is partly false but the investigations are fruitful, and will in due course show the extent to which the idea holds—and fails to hold. For this reason I think that Functionalist social anthropology is not really, appearances notwithstanding, conservative in its ultimate effects, and is unlike and superior to the woolly functionalism of conservative political theory.

Another fairly novel feature of Malinowskian functionalism was its fusion with a-historism, an unusual combination. The European conservatives who speak of wisdom of institutions generally also speak of the wisdom of a tradition and a past. But the Malinowskian combination is not so surprising if one reflects that many of the Evolutionists against whom he was re-acting were also rationalists (for which they get little credit nowadays, a current stereotype lumping them together with 'historicism'). His a-historism was the obverse of their evolutionary approach, his functionalism the denial of their rationalistic interpretations.

Another idea with profound ethico-political implications is the social view of myth and ideology. Both Professor Firth (pp. 12 and 13) and Professor Nadel (p. 205) quote similar and rather moving expressions on Malinowski's part, one written in 1931 and one in 1936, both tending to the view that traditional religion is a necessary barrier to social disaster; of the two passages the latter is, not surprisingly, more openly committed to the pragmatic need for even untrue religion as a necessary condition of civilization. The passage written earlier is still agnostic about this need. Nadel very aptly comments that such pragmatism is close to the cynicism of Plato's 'noble lie'. I agree: and it is apposite here to point out that, on the ethical level, my objection to the post-pragmatist developments favoured by Mr. Leach, the linguistic functionalism which in the name of the diversity of logic see *all* types of statements as legitimate in their own realm and all realms legitimate, is that it obscures the fact that this *is* cynicism, much as at the level of theory it makes nonsense of intellectual progress.

The volume in fact deals with all aspects of social anthropology and in analysing and assessing his contribution it also portrays the developments that have taken place since. Having picked out some

themes for comments, mainly those which have provoked disagreement and neglecting those many where I agree or am incompetent to disagree, it is necessary to correct the possible misunderstanding that the book as a whole is being criticized. On the contrary—this book is to be whole-heartedly commended, not only to those interested in anthropology but also to anyone interested in seeing thought in action, a living tradition laid bare. There could hardly be a greater compliment to Malinowski and the tradition he has initiated than the fact that a *Festschrift* of this kind, instead of being uneven, disjointed and academically formal, should be so exciting (I read the book almost at one sitting) informative and complementary without being repetitive. It is complementary even—or especially—in its disagreements, and in its unresolved problems, such as the delimitations of structure, function and culture, where the definitions are both divergent and unsatisfactory (though I doubt whether this matters for practical research purposes); and it gives one so dynamic a picture of the subject of social anthropology that one can practically see it moving before one's eyes. It is of course far more than a portrait of a clan, it is a convincing account of a science in action, an account which succeeds in explaining its past but also inspiring admiration, confidence and interest in its future.

ERNEST GELLNER

Britain and the United Nations. GEOFFREY L. GOODWIN. Prepared for the Royal Institute of International Affairs and the Carnegie Endowment for International Peace. *O.U.P.*, 38*s*.

This volume is one of a series of national studies on international organization sponsored by the Carnegie Endowment for International Peace in more than twenty countries. The British volume was prepared by a Study Group of the Royal Institute of International Affairs under the chairmanship of the Rt. Hon. Kenneth Younger, M.P., for whom Geoffrey Goodwin of L.S.E. acted as Rapporteur. It began its deliberations in 1952 and concluded them in 1955; this book is the result.

The dates are important. Except for the chapter on disarmament, there is no reference here to events since 1955—and for this subject those of November 1956 are more than a little significant. The time-lag in publication makes this a piece of contemporary history, not a

current commentary. And history this curious decade of 1945-55 has now become—a period when two Great Powers straddled the world and—only just—managed to co-exist, but a period without the still more acute problems of our own day, of the Great Deterrent itself, and the hazards of the Early Warning system. The first surprising thing about the book is to realize the speed at which the developments it recounts, seemingly of our own time, are so rapidly dated. Woodrow Wilson's world was perplexed by the isolation of the Middle West. Ours is permitted to exist only by the decisions made in the bowels of the earth in Omaha, Neb. Yet this new system of perilous security is a product only of the last three years.

Mr. Goodwin makes very clear now, even before 1955, the initiative had begun to pass from Britain to the United States. It is arguable nevertheless that he minimizes the extent of it—and of the impact on the U.S. and the U.N. of the presence of the U.N. Secretariat on the East River. This is worth more than the footnote on p. 399. Nor does he suggest—perhaps because he is concerned only with the decade 1945-55—how total was the change in the strategic position of Britain in the Middle East. He recounts the impact of each successive Middle Eastern crisis on Britain—U.N. relations, but the major conditioning factor here was surely the decline in British economic-cum-military striking power? And this is worth more than the footnote on p. 66. The major shift in U.S.—U.S.S.R. relations in the Middle East came with the 'Northern Tier' policy of Mr. Dulles; and it was this, and not the U.N., which was responsible for the agonizing—and catastrophic—re-appraisal of our own Middle Eastern position. This re-appraisal (evident in 1954) produced the incidents of 1956; and causes and results alike took place outside the orbit of the U.N.

But it is the excellence of the book that leads one to raise these issues. And it is particularly good because it bears the stamp of one man's thinking. Although a Study Group report, it is neither anonymous nor ambiguous. After tracing the genesis of the U.N., Mr. Goodwin offers three case studies—the Middle East, the Far East, and Disarmament. He then, in a most illuminating analysis, describes what he calls 'The "De Facto" Revision of the Charter'. He believes that, although the U.N. has much to its credit—the resistance to aggression in Korea, the help given towards the independence of Israel, Indonesia and Libya, the intervention *re* Berlin and Kashmir —there has yet been a steady loss of confidence in it. This he traces

not only to the *realpolitic* of the cold war, but to the growth of power blocs that that war has occasioned, to the relative decline of the Security Council and the relative increase in the authority of the General Assembly, and to the growth inside the U.N. of strong anti-colonialist pressure groups. These stimulating reflections are followed up by some equally searching analyses of the success of the specialized agencies and a most valuable chapter of conclusions, in which his summary of 'British Public Opinion' is as good as anything in the book. Indeed Mr. Goodwin's grip and mastery seem to become stronger as the book proceeds: he writes laconically and modestly but there are many deft touches.

Among them may be mentioned his references to the U.N. and the Commonwealth. He has a happy dig at those people in Britain who 'take almost a perverse pride in not being able to explain the nature of the Commonwealth to others, as though the invention of something which is at once both effective and inexplicable were the *ne plus ultra* of political genius'. It may be that NATO rather than the U.N. was for Britain 'the ideal type of international organization' (p. 57) but Mr. Goodwin believes that the U.N. has brought advantages to the Commonwealth. The attachment of the Commonwealth countries to the U.N. is quite striking. The U.N. may be indeed one of the forces helping to hold the Commonwealth together, and in turn the Commonwealth can greatly help the economic work of the U.N. and its agencies as it is 'the only political institution which effectively bridges the gulf between the industrialized West and the underdeveloped East' (p. 458).

Mr. Goodwin has produced a volume at once critical, lucid and stimulating; it is also admirably judicious, and not without a reasoned, if courageous, optimism. 'Faith', as he says, 'is the very life-blood of the United Nations.' He is to be congratulated both on his skill and on his optimism.

ESMOND WRIGHT

Halls of Residence. UNIVERSITY GRANTS COMMITTEE. *H.M.S.O.*, 3*s.*

Except in the early post-war years, the proportion of the total student population living in halls of residence or colleges has remained remarkably constant since 1935. The percentage was 25·3 in 1938 and 27·0 in 1957. On this basis, therefore, it might seem that a fair share of the money spent on University buildings during the

post-war expansion period has been allocated to providing residential accommodation. However, this is only part of the story. The proportion of students living at home has fallen from 41·5 per cent in 1938 to 26·1 per cent in 1957, whilst the proportion living in lodgings has risen from 33·2 to 46·9 per cent. In terms of numbers those living in lodgings have risen from about 16,000 to 41,000.

Changes in economic circumstances in the last 20 years have not been of the kind to increase the number of good professional landladies in anything like this proportion, if at all. The result is that a large number of students are living in overcrowded, sordid lodgings, with quite inadequate facilities for private study. In many cases the lodgings are too far from the University for proper participation in extra-curricular activities.

Because of the 'bulge' it is likely that by 1967 the number of students living away from home will increase by perhaps 25,000. It is highly desirable that hall of residence accommodation should be provided for all these students in order to prevent from rising the number who live in conditions which prohibit them from obtaining the full benefit of the University training.

If a large amount of money is to be spent on halls it is important to ensure that the full educational benefit will be reaped. That was the reason for setting up the sub-committee. Its main terms of reference were 'To consider and report on the nature and importance of the role which should be played by halls of residence in the education of university students, and its relationship to that of other forms of student organization; . . .'

The report is welcome in that it presents strong evidence of the educational benefits to be derived from residence. It lays great emphasis on the necessity for maintaining standards in building future halls, and on giving the hall and its warden proper independence and status within the University. The case for the established form of hall of residence could not be better expressed.

But it contains very little 'new thinking'. The hall is seen in the context of the small pre-war university with the dominance of the Union largely relieving the hall of responsibility for communal activities. Pre-war, in a provincial university of say 1,000 students, the Union was the proper medium for such activities. Halls of residence were necessarily too small units, and served too few of the students. But most provincial universities now have, or are contemplating expanding to, a student population of around 4,000. A Union of

4,000 is overgrown and cannot cater adequately for its members so far as organized activities are concerned. Only as many people can speak in a debate, whether there are 4,000 members or 1,000. Universities which ran three rugger teams pre-war often still only have three teams. The number of characters in a Shakespeare play has not increased with the growth of student numbers. For the majority of members who are not sufficiently outstanding to play for a university team or hold office in one of the committees, the Union has become merely an eating house. Alternative foci are needed within which greater numbers of students can concentrate and develop their activities.

The case for splitting a student body of, say, 4,000 on collegiate lines in much larger groups than the traditional hall is very strong. For financial reasons the colleges would not have academic functions as at Oxbridge. But they would develop a different, more significant, social pattern than the hall. The students would be a community rather than a family which would have all the advantages of size and yet would command at least as deep a loyalty from its members. Far more of the students, particularly the less talented ones, would be able to participate in the college activities than can be catered for in the overgrown union or the too small hall.

The grouping of halls is certain to be forced on most universities, if only because of the shortage of sites. A university which has to plan for an eventual hall population of 2,000 or more will be fortunate if it can find the 15 sites necessary to house them in separate establishments of 130 to 150, as recommended in the report. If the halls are to be grouped the logical step is to have not only common heating plant and kitchens but also a 'great hall' for dining, and one library and recreational block. In other words, create physically a college.

Apart from the environmental advantages of a collegiate system, considerable economies in construction costs could be achieved by 'building high'. The cost of constructing some recent halls of traditional pattern has been much greater per unit volume than the cost of constructing high blocks of flats with approximately the same standard of finish. The explanation lies almost entirely in the economies achieved in handling materials and prevention of waste of workmen's time (both voluntary and unavoidable) when the plan area of a building is limited and tower cranes are used in its construction. Apart from monetary economies the tower block allows a high density of population where sites are restricted. A plan for a student

residence which was recently drawn up could house 180 students in very adequate individual rooms in a 12-storey block only 22 yards by 14 yards in plan. Three or four such blocks skilfully grouped round the domestic and recreational buildings could be architecturally very exciting.

Using sites in this way would mean that there will be greater possibilities of housing students near to the university. This in turn would make it easier for non-resident members of the college (living at home or in lodgings) to play an active part in its daily life. They could be encouraged to lunch as well as dine in hall, and use its library in the daytime and evenings for study. Taking lunch in hall would, incidentally, relieve the pressure on union catering facilities which exists in most universities.

If the college plan were adopted the Union would decline in importance as far as the resident members of the university are concerned, and also those non-resident members who were able to take advantage of their collegiate membership and use its facilities. That would be a pity in many ways, but the union would still play an important part in catering for the students living at home or in lodgings. Indeed it might be better able to serve the non-resident students as the growth of the collegiate system relieved the pressure on union facilities. But it should not be forgotten that the union at its best can never be as effective in civilizing and moulding the average student as participating in a fully integrated college life. The union is an inferior substitute for, not a rival to, college.

Wardens too would change their function and would be fewer in number, although there is no reason why the relative size and the influence of the senior common room should in any way decline. But the importance of the 'family spirit' in halls with the warden as paternal head has probably been exaggerated. The lack of intimacy of contact between the Master of Trinity and the members of his college does not seem to have reduced the civilizing influence of the college.

W. EASTWOOD

The Shaping Spirit. Studies in Modern English and American Poets. A. ALVAREZ. *Chatto & Windus.* 15*s.*

Mr. Alvarez has written an admirable book, which is likely to help clarify the changes now confusedly going on in literary taste. Not

because of any theory he has to propound, or because his judgments seem specially magisterial or original or challenging, but because he speaks directly and deliberately from his own experience as a reader. He is level-headed, candid and acute; he writes with a due respect for scholarship and, more tellingly, with a good journalist's attention to the pitch and timing of his remarks. This is refreshing, since it implies a confident expectation of meeting with a serious but not wholly academic audience. Too much criticism today bears the stamp of the university lecturer, anxious to expound something or to demonstrate something. Mr. Alvarez has no such professional deformation. He is solely intent on the give-and-take between poet and reader, on his personal impressions, tested and compared together but not erected into laws.

With each of the poets he is considering (mainly Eliot, Pound, Wallace Stevens and Hart Crane; Yeats, Lawrence, Empson and Auden), Mr. Alvarez fastens as cleanly as possible on the poet's mode of contact with the central tradition of verse in English—his own view of tradition being slightly different from Dr. Leavis's and considerably different from that of Cleanth Brooks. Having isolated the poet's stance, he defines it firmly and elegantly, with a neat hand at hair-splitting where hair-splitting is called for. On Pound, for example: 'He seems to have devoted himself so wholly to his task that he could read with all his critical attention not exactly on the sound of the thing but on something that needed more brain-work, the technique of the sound'; and again, 'His language has no literary incrustations. He is the only poet in the last three hundred years to write English as though he had never read Shakespeare.' One jibs for a moment at this description of Pound's language, only to perceive that it is precise in its context, that it says something worth saying, and that the jerk of the epigram was needed to say it. Occasionally Mr. Alvarez's conversational wit runs away with him (in an aside on Dylan Thomas, for instance), or his personal opinions carry his criticism off centre—he wants to argue with Auden, to apologize for Hart Crane. And when he interprets difficult passages, which he does sparingly, his interpretations are not quite convincing. But this matters less than it might appear to, for he never forgets that good poetry communicates more than is understood, and he discriminates finely between the different kinds of communication that underly the prose meaning of each of his poets, the different kinds of difficulty that the reader has to encounter. For example, he crystallizes the

difficulty that many readers must find with Eliot by distinguishing, where distinction is valid, between Eliot's style, his declared beliefs, and the impact of his feelings. 'There is no difficulty in giving poetic assent to Eliot's world, for it exists by virtue of the purity and control of his writing. But there is a difficulty in accepting the conclusion which is everywhere implied; and that is not the orthodoxy, but the rejection and denial which the orthodoxy honours.' A summing-up like this illustrates Mr. Alvarez's capacity for attentive and active reading. He has the essential qualification of a good critic, the candour which aims at justice to oneself as well as justice to the poet.

Mr. Alvarez admires the technically austere and the mentally agile, ambiguity-bestriding forms of poetry that 'the modern movement' brought with it in the 'twenties, under the banners of Baudelaire and of Donne. But the modern movement has plainly spent its force by now, and in any case the qualities it favoured in poetry and in criticism are not the true centre of the English tradition as Mr. Alvarez sees it. The true centre, for him, is the language of sentient quickness, of full emotional apprehension; and, among modern poets, he finds it only in Lawrence and in Yeats:

> It is Yeats's emotional resources that seem endless; not because they are always so original; they aren't; but they are always right. Quotations from him strike home first because of their centrality: that is what the feelings are like . . . Yeats has the great central human view, a little like Tolstoy, though not so profound nor so wide-ranging. Behind this centrality is the weight of a whole tradition which has concerned itself with much the same themes.

Hence Mr. Alvarez finds that Eliot 'uses tradition', whereas Yeats is 'in it'. Lawrence, too, is 'in' the main English tradition, for Mr. Alvarez, in a way that Eliot, for all his authoritative and persuasive accomplishment, is not. In a vigorous essay he praises Lawrence's poetry—as poetry in its own right, not as autobiographical jottings—first for its 'complete truth to feeling' and second for its wit, which Lawrence uses, he observes, 'not in the modern fashion, to save his face, but to strengthen the seriousness of what he has to say'. In effect, this is how Mr. Alvarez would read Donne as well.

Throughout his discussion Mr. Alvarez uses Eliot's criterion of intelligence in poetry, intelligence, as distinct from intellect, meaning 'an immediate and whole fullness of feeling and thought'. But he applies this criterion on the lines of the romantic poet-critics (from

whom I should say it ultimately comes, despite Eliot's profession of classicism). He wants to hear 'the true voice of feeling'; he separates his poets out somewhat as Keats separated Shakespeare from Milton; his essential values of spontaneity and centrality are more like Wordsworth's values than Eliot's, though of course without the special overtones of Wordsworth's nature-worship. He responds to the romantic in Yeats, not the symbolist.

What this points to, no doubt, is that reappraisal of the romantics that has been on the agenda for some time now. However, Mr. Alvarez draws another inference from his reading. He argues that the modernism of Pound and Eliot was really American and not English. Lawrence and even Yeats were touched by it superficially at most. It reflects an American cosmopolitanism, it sprang from the 'absolute need' of American poets 'to forge a new poetic language', and what keeps it going and productive in America today is the same bracing isolation of the American poet from his public that brought it about originally. Now, much of this argument is fresh, timely and illuminating; it helps to clear the air. But it does not work out altogether. For instance, in his essays on Empson and Stevens, whom he describes in closely similar terms, Mr. Alvarez asserts that Empson is rootedly English, but he does no more to back this particular assertion than mentioning Empson's local background while missing Stevens's background out. He takes no account of the general sense of isolation, the sense or the fact of exile, that has affected modern artists of many sorts, European as well as American. And when he comes to examine the special Americanness of American poets in his closing essay, 'Art and Isolation', the results are disappointingly vague and meagre. This is the weakest part of his book. These remarks are not intended to dispose of Mr. Alvarez's perception, for which one can only be grateful, but to suggest that he has not followed it up effectively and that the principal merit of his book lies elsewhere. There is always liable to be a gap between our experience as readers of poetry and the terms in which we express it and Mr. Alvarez has helped considerably to show where, at present, the gap falls.

L. G. SALINGAR

Economic Theory and Under-developed Regions. GUNNAR MYRDAL. *Duckworth.* 18*s.*

At a gathering of experts round a luncheon table somebody raised the question: Why are the Americans so much better off than the

Chinese? It was interesting to observe the diversity of answers. No two members of the group agreed. If, instead of asking why there are vast international inequalities, they had asked themselves why some countries have grown faster than others, the way to agreement might have been easier. The evidence of great current differences does not show that these are of fairly recent origin. A film strip may provide the clue to the snapshot.

If present rates of growth (of, say, income per head) of advanced countries were followed backwards, we would soon approach zero. The proper question to ask, therefore, is: What forces set the upper limit to the rapid economic progress of a few countries in the last 200 years? If we could discover a permissive condition that allowed a high ceiling for advance, we would not be surprised to find that actual rates of growth have varied widely from country to country, and that therefore inequalities are now very great.

What matters here is the *absolute* difference between the growth rates, and neither the *proportionate* difference, nor, if absolute differences are great, the differences in magnitudes at the start. A simple example illustrates the point. Call A_1 and A_2 the initial magnitudes (of the gross national product per head) in two countries. The initial ratio of these two magnitudes $R = \frac{A_1}{A_2}$; the final ratio (F) after a number of years (t) has passed will depend on the initial ratio (R) and the respective rates of growth (r_1 and r_2).

$$F = \frac{A_1(1+r_1)^t}{A_2(1+r_2)^t} = R\,\frac{(1+r_1)^t}{(1+r_2)^t} = R.k \text{ where } k = \frac{(1+r_1)^t}{(1+r_2)^t}$$

Let us now calculate k for different growth rates over 5, 10 and 20 years.

	t=5	t=10	t=20
$r_1 = 2\%$, $r_2 = 1\%$	1·05	1·10	1·20
$r_1 = 20\%$, $r_2 = 10\%$	1·55	2·39	5·72

From this table it can be seen that, if two countries started with equal incomes, one growing twice as fast as the other, an absolute difference of 10 per cent would make income in the faster growing country 5·72 times that in the slower one after 20 years. If, with the some proportional advantage, the absolute difference were only 1 per cent, the income ratio of the countries would hardly have been

altered. If the faster country started with 50, the less fast with 100, and if the former grew at 20 per cent, while the latter at 10 per cent, the fast would have caught up the slow within 10 years. But if the fast grew at 2 per cent and the slow at 1 per cent, the latter would still be substantially ahead after 20 years.

We do not have to search far for the permissive condition which raised so vastly the upper limit to the process of economic growth. It was clearly scientific knowledge and its application to production. And a variety of processes which reinforced each other ensured that different countries' rates of growth varied widely, between zero and 25 per cent, per decade. Thus inequalities were bound to increase.

Typical examples of such cumulative processes are the following:

Capital supply: increased productivity: higher real income: higher capital supply, etc.

Higher demand: higher incentive to invest: higher productivity: higher demand, etc.

Improvements in the quality of the labour force (literacy, better knowledge, improved health, greater mobility): greater productivity of labour: more resources to improve education, health, mobility, etc.

Reduced inequality: weakened revolutionary forces: stronger democracy: more concessions to equality, etc.

Higher incomes: attraction of skilled men and capital: reduced costs of communal services: lower rates and taxes: higher incomes, etc.

Mr. Myrdal's central assumption is the cumulative causation of economic, social and political factors. Liberal economic theory, with its model of stable equilibrium and its attempt to isolate economic factors while assuming all others to be constant, is helpless in the face of the evidence of vast and increasing inequality. By abstracting from those forces which are normally disequilibrating and by concentrating upon those which restore 'balance' whenever it has been 'disturbed', the theory commends free international trade as a policy which not only maximizes wealth and welfare but also promotes equality. Marxism, although free from the bias towards stable equilibrium analysis, neglects the forces that reduce inequalities within the

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advanced countries, and is (partly for this reason) not interested in policies which would reduce international inequalities.

Myrdal's *analysis* is more pessimistic than that of the traditional theory of international trade, but the *policy* based on his analysis is more constructive. It is, in essence, the extension of the principles of the democratic welfare state to the world as a whole. This conclusion is reached not because Myrdal believes in equality (although he does), but because it is implicit in the way of life to which we aspire. A misleading theory may have lulled our conscience into acquiescence. Myrdal stirs it up by laying bare the tension between our professed ideals and our practice.

One may wish that Myrdal had worked out in more detail the connection between equilibrium analysis and *laissez-faire*, and between the cumulative process (inherited from Wicksell) and state planning. After all, it is possible to believe that a very bad state of affairs has a tendency to reassert itself and that only massive state action can remedy the situation (equilibrium analysis combined with planning); or that the cumulative process towards ever greater improvements makes state intervention unnecessary (cumulative causation combined with *laissez-faire*). The answer suggested by Myrdal is partly that equilibrium is rarely 'just equilibrium' but has strong but illicit connotations of positive value; and partly that in the constellation of cumulative causation state actions are important. But it would be interesting to know to what extent Myrdal conceives the connections between certain economic models and certain policies to be logical, and to what extent psychological.

In the hands of Myrdal, the Principle of Cumulation overcomes not only the implicit bias towards *laissez-faire* of liberal economic theory, but also the bias towards one-factor analysis (and hence one-factor remedies) shared by liberals and Marxists. It is a complex of diverse forces that interact and none of them can be singled out as the hero or the villain. Myrdal is particularly critical of the view that the promotion of free international trade will bring salvation to the poor countries. (International trade has been described as an 'engine of growth'.) On the contrary, free trade tends to result in increased inequalities by preventing the benefits of economic progress from spreading to the underdeveloped countries, and thus strengthens the forces of stagnation.

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criticizing the philosophical foundations of social analysis, he develops new economic strategies. The critique of the philosophers and scientists of the 17th century paved the way for an industrial revolution which transformed the relations between man and nature. If the next hundred years will see a transformation in human relations across national boundaries, Myrdal's critique will have done much to bring this about. PAUL STREETEN

Year Book of Education 1957: Education and Philosophy. Eds. JOSEPH LAUWERYS and GEORGE BEREDAY. *Evans Bros.*, 63*s.*

The editors of the edition of the *Year Book of Education* for 1957 have adopted a most ambitious title. They have indeed allowed themselves great latitude in respect of what they understand by 'philosophy', and 'education', and in some articles the two topics scarcely touch. Mr. W. H. Walsh talks about philosophy without any mention of education, while Sir Cyril Burt-is just able to mention a philosopher or two in tracing the ancestry of modern educational psychology. The editors have hoped to make the very variety in the relations between 'education' and 'philosophy' produce a pattern of complex unity for their volume. The result judged *as a whole* seems to me to fall short of fulfilling their hope.

In criticizing the *Year Book* it is important to consider it not merely in respect of the individual achievements of the editors and the authors whose aims and interpretations one can separately appreciate, but also as an organ on which the educational world relies for surveying world-wide opinion on some special topic year by year. In making criticisms from this point of view the last thing one would wish to do is to discourage originality and boldness on the editorial side. In this instance we undoubtedly owe a salute to the editors for their ambitious conception and for the energy with which they have carried it through.

The book falls into six sections, apart from the Introduction. These are entitled: The Great Traditions; Determinants of Policy; National Systems; Historical Examples; Experimental Institutions; The Teaching of Philosophy and Education. In each of these I have, I think, found something of interest; in some I have found articles which complemented or provided contrast to one another in an illuminating way. There are a number of crucial issues raised, and I can

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imagine myself referring people to this or that article on a specific point. It would be easy to pick out some for praise except that I feel disinclination to name individual contributions for the very reason that they would be selected less for their 'contribution' to the plan than for their success in treating in a necessarily summarized way a topic that happened to touch the reviewer's own special interest. It is such reasons that lead me to say that despite the value there is in much of the writing, the result fails to justify the editorial plan.

Apart from the second section which holds most uneasily together —though the editors were right enough not to deprive us of its contents—each section is concerned with a topic of importance, and each contains contributions that make good reading. The reading nevertheless brings with it an irritating awareness that the article in question gives no more than a hint as to how the topic could have been treated. Each topic is large and some are elusive; the plan which is intended to unite them is of cloudy grandeur. The preface to the whole gives warning that 'no doubt many gaps will be discovered both in geography and philosophy'. Yet it is hard to see what, given the generality of the objective proposed, could constitute a 'gap'. An effect of discontinuity and vagueness of relevance, where the various authors have had no consultation with one another, was almost inevitable. I hope that I have expressed clearly enough my appreciation of the work. But though I recognize that the enterprise is necessarily limited by the fact that 'the authors have had no consultation with one another', I would nevertheless insist that if we are to have the very great value of the confluence of different streams of thought from all over the world it is surely of the utmost importance that continuity and coherence be secured by making sure that the purpose and plan of the enterprise is well understood by all the contributors—and is therefore a well tailored one. I think this means that it would have to be more limited in scope than this volume. Indeed any one of the section headings would seem to me to offer splendid scope for a volume in itself.

My second criticism is a more radical one and it will be recognized as springing from a personal view on such questions. Is it really useful to array the various senses in which one can, or at any rate in which people do, talk about 'philosophy' and knit them together so as to emphasize a single pattern in the relation between 'philosophy' and 'education'? In the result philosophy has to veer from the sense in which it represents the activities of Heidegger and Wittgenstein

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(or rather Heidegger *or* Wittgenstein), to that in which an American can say 'my philosophy of this job is . . . ' The result is to illustrate too vaguely, and to explain too superficially, what part philosophical thinking can or does play in relation to educational thinking and to educational practice, and again just how educational practices and specifically educational theories may be related to wider contexts of thought, habit and belief; and again how the activity of philosophical reflection may conduce to better thinking about education. In emphasizing that such issues are related in being concerned both with philosophy and with education the *Year Book* seems to me to have brought itself up against too many pitfalls and bunkers to get anywhere near the wide coherent view it has aimed at reaching.

JOHN PILLEY

Political Thought in Medieval Times. J. B. MORRALL. *Hutchinson*, 18*s*.

Mr. Morrall's achievement is a remarkable one. In some 130 pages of text he has written an essay on the development of political thought between the fall of Rome and the Reformation; he has set this development, as his publishers rightly claim, 'against the historical background which animated it'; and yet he has contrived to be concrete, coherent and stimulating. His knowledge of the modern literature over his whole wide field is great; and enables him to shed far more light upon, and assess far more adequately the significance of, the civilians, the canonists and Marsilius of Padua in the history of medieval political ideas than the general run of text books on this subject. Naturally, in order to cover ground so extensive and diverse in so little space, his essay takes of the form of a discussion of a central thesis. This may be defined in his own words as 'the rise, development and collapse of the ideal of a Christian commonwealth and its replacement by a return to a more purely political conception of the state'. If this can be used as a standard of relevance, it is a yardstick which has much to recommend it and which brings into the picture statements of political ideas which do not always find a place in treatises on the subject. In short, this is a book which will at once interest and stimulate students of medieval political thought; and its value is enhanced by a useful short bibliography of sources and secondary works, part of which is equipped with critical notes.

At the same time, the reading of it gives rise to two reflections. One is about the practicability of writing an introduction to medieval

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political thought in relation to its historical background in the space which Mr. Morrall has allowed himself. If he is forced to be selective in the authorities of which he treats, he is forced no less to be sketchy in the extreme in his account of the historical background. In consequence, the relationship between theory and practice will inevitably appear somewhat obscure to those relatively uninitiated in medieval studies. Secondly, and for the same reason, the statements of medieval political ideas he chooses to study are in some respects narrowly conceived in relation to the central problem to which he has addressed himself. No-one would expect him to leave out of consideration St. Augustine, or St. Thomas Aquinas, or Dante; while he himself has pointed a way to an ampler conception of the relevant sources by his discussion of the ideas of the Roman and canon lawyers (including the importance, demonstrated by Gaines Post and others, of such doctrines as *plena potestas* in the growth of ideas of representation and of representative institutions). One wonders, however, whether his notion of relevance is still not rather more conventional than his conception of what constitutes the significant themes of medieval political thought. It is arguable that his authorities might with profit have included, for example, Magna Carta and the charters won by the leagues of early 14th century France, the manifestoes of the troubled times in England under Henry III and Edward II, judgements given in the secular courts, or the preambles of statutes and ordinances. The 'return to a more purely political conception of the state' is the least documented part of the main thesis of this essay, if only because it has to be sought in the practice of politics as much as in the writing of treatises. It may also be that its corollary, the evolution of the bureaucratic equipment of political authority, is the least noticed part of the historical background. One hopes that some day Mr. Morrall may treat this problem on an ampler scale in his incisive and stimulating manner.

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